
INPUT

VENDOR ANALYSIS
PROGRAM



Vendor Profile

A Publication from INPUT's Vendor Analysis Program

May 1998

Cap Gemini Package Based Solutions- Baan Services Providers

Contact Information for Baan Services in North America

Vice President: Steven A. Koutros

Cap Gemini

5847 San Filipe, Suite 990

Houston, TX 77057

USA

Phone: 713-307-7900

800-227-4230, extension 8651

Fax: 713-307-8652

Internet: www.cgapbs.com

E-mail: skoutros@usa.capgemini.com

The following profile outlines the services and support offered by Cap Gemini Package Based Solutions for Baan Services.

Company Background

Cap Gemini is one of the largest information technology consulting companies in the world, with over 30 years of experience helping their clients achieve extraordinary results. They bring Enterprise Resource Planning technology into focus by developing IT solutions that support all parts of their customers' business now and into the millennium.

Cap Gemini's Business Mission

Their aim is simple: Cap Gemini Group works with clients to enable them to run their businesses better by developing Business Solutions leveraging the latest IT Technology that addresses their most critical issues. In addition, Cap Gemini can call upon resources and expertise across the world, for the benefit of their customers, and can "reuse" solutions across national boundaries.

Cap Gemini America's main focus is centered around six strategic offerings:

TransMillennium™ Services

Helps companies solve their year 2000 issues before they adversely affect business

Information Systems Management (ISM)

Provides the majority of the outsourcing activities within Cap Gemini America

Package Based Solutions (PBS)

Develops and delivers a complete range of services around ERP information systems

IT Excellence (ITx)

Helps IT organizations improve their effectiveness through measurement, diagnostic and benchmarking services

Advanced Technology Services (ATS)

Assists firms in using the latest proven technology to transform both their businesses and the ways they conduct business

Telecom

Cap Gemini has been a leading Customer Care and Billing (CC&B) supplier to European telecom and media companies for years, mainly supplying tailor-made solutions

In 1994 Cap Gemini Group was awarded the ISO 9001 certification for the study, design, implementation, and maintenance of information systems, and has been successfully recertified in 1995, 1996, and 1997.

Worldwide, Cap Gemini had revenues of \$3.4 billion in 1997, of which \$450 million came from North America. North American Baan revenues totaled \$25 million

Baan Activities

Cap Gemini entered the Baan services market in January 1996 in North America.

In 1997 Cap Gemini won the Baan Gold Partner Award in the Global Category. This Award was based on :

- Revenue Generation
- Implementation Capacity
- Knowledge Creation
- Shared Risk
- Customer Satisfaction

Cap Gemini currently has Baan Competence Centers in the USA, UK, Nordic, Benelux, France, Switzerland, Italy, Spain and Portugal. These Centers offer a variety of services, including helpdesk, migration tools, training facilities, reference models, Baan software, and knowledge management and transfer. They play a major role in Cap Gemini's sales and delivery process.

Furthermore, Cap Gemini is actively involved in Dynamic Enterprise Modeling through a partnership with Baan Business Innovation.

Cap Gemini is, or has been, part of the development team for:

- The Process Batch Manufacturing Model
- The Project Services Model
- The Wholesale Model
- The Retail Model
- The Automotive Dealer Management Model
- The Transport Model

Employees

Worldwide Cap Gemini has more than 30,000 employees of which 3,200 are located in North America.

Implementation Approaches

Cap Gemini has a complete generic methodology—PERFORM—for package based solutions, which includes links with vendor methodologies. For Baan, links with TARGET are built identifying common coverage areas where TARGET is complemented by Cap Gemini methods.

Three specific elements of PERFORM provide ERP differentiation:

- *Scope*
An up front process which ensures that the resulting project is business benefit-driven and encompasses all necessary components to implement business and IT changes
- *Package Based Applications -(PBA)*
A life cycle specifically tailored to the development and implementation of application systems based on existing software packages

- ***International Applications Rollout (IARO)***

This framework addresses the complexity, skills and risks associated with carrying out international deployments/programs. For example, the framework covers business issues, change management, internal communications and publicity, program management and organization, and IT and support issues.

Ongoing Support Offerings

Cap Gemini maintains fully functional data centers in Houston, Texas, and also in Holland and the United Kingdom.

Pricing Approaches

Cap Gemini offers the following pricing options:

- Fixed Price
- Time and Materials
- Risk/Reward

Alliances and Partnerships

In the North American market, Cap Gemini has an alliance with Hyperion.

Vertical Market Competencies

Cap Gemini focus markets are:

- Engineering and Construction
- Heavy Equipment
- Aerospace & Defense
- Consumer Product Goods
- Logistics

Exhibit 1 notes Cap Gemini's areas of vertical market expertise, and the percentage of Baan Revenues derived from three vertical market segments.

Exhibit 2 details Cap Gemini's participation in seven broad market categories, in terms of the level of consulting or implementation involvement (e.g., consulting with client, who will then perform the implementation, or implementing the Baan system for the client).

Exhibit 1

Vertical Market Expertise

Vertical Market	Sub-segment	% of Revenues
Discrete Manufacturing	<ul style="list-style-type: none"> Automotive Aerospace Electronic Mechanical/Engineering 	60%
Process Manufacturing	<ul style="list-style-type: none"> Food and Beverage Pharmaceuticals Chemicals Oil and Gas 	35%
Distribution	<ul style="list-style-type: none"> Retail Wholesale 	5%

Source: Cap Gemini

Exhibit 2

Level of Vertical Market Involvement, by Activity

Vertical Market	Consulting	Implementation
Aerospace & Defense	Medium	Low
Automotive	Medium	Low
Process Industries	High	High
Hybrid	High	Low
Project Industries	High	Low
Electronics	High	Low
General Manufacturing	High	High

Source: Cap Gemini

Strategic Positioning

Cap Gemini considers the following to be its main differentiators and strengths in the Baan market:

Vertical Market Orientation, Expertise and Experience

Cap Gemini has oriented its business to provide in-depth vertical market expertise to clients throughout the life cycle of service provision. Creation of Vertical Market Service offerings have been key to the success of most Cap Gemini vertical market units.

Plan, Build, Run

Cap Gemini is able to provide a complete service to its clients, including package fit-function analysis, design, development, implementation and operational running of Package Based Solutions (PBS).

PERFORM (the Cap Gemini Delivery System)

Cap Gemini's success with clients results from giving them what they want, when they want it, by building quality into every project and service they deliver. PERFORM provides the basis for achieving success in delivery because it has the answers to the key issues raised in a project and service delivery.

Geographic Coverage

The presence of the group in over 18 major countries and its understanding of local issues, combined with Cap Gemini's ability to mobilize teams and behave consistently across the globe has frequently led clients to select Cap Gemini over a purely domestic competitor.

Additional differentiators for Cap Gemini in the U.S. include:

- End-to-end ERP Solution
- Strategic Business Consulting
- IT Infrastructure Excellence
- System integration Skills
- Training Resources and Skills
- Outsourcing Skills
- Knowledge Management Skills

Plans for the Future

Cap Gemini will be developing DEM models with Baan Business Innovation. Cap Gemini considers all North American regions to be focus markets in 1998.

Selected Customer Projects

The following four client profiles demonstrate Cap Gemini's Baan implementations in North America.

A World Leader in Electronic Security

- *Background* - Global, \$1 billion in sales, multiple manufacturing sites, direct and indirect sales channels
- *Business Situation* - A declining market share, non-integrated acquisitions and related information systems
- *Cap Gemini Approach* - Concurrent transformation of the whole company, over three years; Competence center assessment, function fit analysis, phased roll-out, and use of Dynamic Enterprise Modeling

- *Why Cap Gemini Was Selected* - Partnership approach; Business expertise, process redesign, change management and mobilization skills
- *Tools* - BRP/change management/mobilization; BAAN Target methodology
- *Results* - First function "live" with Baan in five months; Transfer of knowledge and project management.

A Leading Supplier of Steel Cables in North America

- *Background* - Worldwide leader in steel cable production, multiple manufacturing sites (MTS); direct and indirect sales channels
- *Business Situation* - Non-Year 2000 compliant Triton 2 software (Baan). Non-profitable operations
- *Cap Gemini Approach* - Roll out BAAN IV. Function fit workshops, mobilization and phased roll out
- *Why Cap Gemini Was Selected* - Business consulting skills and Baan implementation experience
- *Tools* - DEM and Target Enterprise implementation methodology
- *Results* - Successful "Go Live" January 1998.

A Leader in Injection Molding Equipment

- *Background* - A global company, with \$500 million in sales and multiple divisions
- *Business Situation* - Streamline operations.
- *Cap Gemini Approach* - Implement distribution and finance modules across 40 logistics and finance companies. Conference room pilots. Train-the-trainer
- *Why Cap Gemini Was Selected* - Project management methodology, experience and module expertise. Flexibility with client's constraints (e.g., accelerated disengagement)
- *Tools* - Target implementation methodology. Perform (Cap Gemini) project management methodology
- *Results* - Roll-out on time and within budget.

A Graphic Equipment Manufacturer

- *Background* - An \$80 million equipment manufacturer for insertion of newspaper advertising. Products engineered to order
- *Business Situation* - Current ERP obsolete; upgraded to Baan. Implementation in progress
- *Cap Gemini Approach* - Complete Sim2 (finance, manufacturing, distribution, service). Train users, bring system live
- *Why Cap Gemini Was Selected* - Experience
- *Tools* - Tailored plan, based on Target
- *Results* - Going live three months after start of intervention.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

August 1997

Cap Gemini America - Outsourcing

1114 Avenue of the Americas

29th Floor

New York, NY 10036-6710

Phone: (212) 944-6464

Fax: (212) 719-5346

President:	Mike Meyer
Status:	Subsidiary
Parent Company:	Cap Gemini S.A.
Total U.S. Employees:	3,000 (6/97)
Total U.S. Revenue:	\$325,000,000
Total U.S. Outsourcing Revenue:	\$40,000,000
Fiscal Year End:	12/31/96

The following profile outlines the products, services, and support offered by Cap Gemini America to its clients for outsourcing services and offers a representative sample of recent outsourcing contracts.

Company Description

Cap Gemini America, a member of the Cap Gemini Group, offers a wide range of strategic information technology transformation and integration services, including information systems management, program management services, consulting, education and training, and software products.

Cap Gemini America was incorporated in the U.S. in January 1981. It is the U.S. subsidiary of the Cap Gemini Group,

headquartered in Paris (France), and one of Europe's largest information technology companies. Cap Gemini America is responsible for the worldwide coordination of Cap Gemini's Worldwide Process Sector, which includes energy and chemicals.

Structure and Operations

Cap Gemini America has reorganized into four functional groups:

- **Geographic Business Units**—Consisting of five divisions—East, Southeast, Central, Midwest, and West—and 34 offices (units). A division manager oversees the units which are in charge of sales and delivery of service offerings.
- **Lines of Business**—Comprised of the five focused business lines for the U.S. These are: Package-Based Solutions (PBS), TransMillennium™ Services (Year 2000), Information Technology Effectiveness (ITx), Advanced Technology Services (ATS) (intranet, Internet, electronic commerce) and Information Systems Management (ISM) (outsourcing).
- **Sectors**—Comprised of the Telecom Sector, the Process (Energy and Chemicals) Sector, and the Global Marketing Units (GMU) and Joint Accounts. They are focused on specific market business knowledge and the interface for customer accounts that need international coordination.
- **Corporate Administration and Support**—Comprised of Finance/Legal/Administration, Marketing & Communications, Human Resources, Delivery, Training & Orientation, Infrastructure & Management Systems, and Knowledge Management.

Within the Cap Gemini S.A. parent organization, Cap Gemini America is responsible for worldwide leadership and coordination of the energy and chemicals sector.

Information Systems Management (ISM) is the business line that provides the outsourcing services offered by Cap Gemini America. Cap Gemini America provides strategic and selective IT outsourcing services, including Program Management Office (PMO) services, Application Management (AM) services, Distributed

Computing Services (DCS), Network Management Services (NMS), Help Desk Services (HDS), and Centralized Computing Services (CCS).

Headquartered in New York City, Cap Gemini America has office locations in Akron, Cincinnati, Cleveland, Columbus, and Dayton (OH), Chicago (IL), Dallas and Houston (TX), Denver (CO), Des Moines (IA), Detroit (MI), Iselin (NJ), Kansas City (KS), Appleton, Madison, Milwaukee, and Wausau (WI), Ft. Lauderdale, Orlando, and Tampa (FL), Minneapolis (MN), Omaha (NE), Bala Cynwyd (Delaware Valley), Philadelphia and Pittsburgh (PA), New York City (NY), Irvine (CA), Portland (OR), Richmond (VA), Seattle (WA), St. Louis (MO), and Washington, D.C.

Strategy

Cap Gemini America's mission is to *partner with business leaders to create and transform organizations, delivering demonstrable results by applying state-of-the-art business knowledge and information technology.*

Cap Gemini's outsourcing strategy actively pursues contracts, either as 'standalone' IT outsourcing contracts or as part of a Concurrent TransformationSM (Business and Systems) contract.

Cap Gemini America's outsourcing strategy leverages best-of-breed alliances to augment and complement its services thereby providing its clients with an end-to-end IT outsourcing solution. This approach broadens the company's capabilities and guarantees excellence in service.

Financials

Cap Gemini America's revenue grew to approximately \$325 million in 1996, an increase of 24% over revenue of \$263 million in 1995. Total U.S. outsourcing revenue rose 48% to \$40 million, from \$27 million in 1995.

Market Financials

Cap Gemini America focuses on four business sectors:

- Energy and Chemicals
- Financial Services
- Manufacturing
- Telecommunications

The company's two largest sources of revenue are the financial services and manufacturing business sectors. In 1996, the company derived approximately 95% of its revenue from commercial sources.

A source of revenue summary for Cap Gemini America, by market, is shown in Exhibit 1.

Exhibit 1

**Cap Gemini America
Source of Revenue Summary**

Market Focus	Year	
	1996	1995
	Percent of Total Revenue	Percent of Total Revenue
Financial Services	28%	24%
Manufacturing	21%	21%
Telecommunications	13%	13%
Retail and Distribution	23%	13%
Process Industries	7%	11%
Travel and Tourism	2%	8%
Government and Public Services	3%	5%
Utilities	3%	5%
Total	100%	100%

Source: Cap Gemini America

Cap Gemini America defines its service around five major axes:

- Information Systems Management (ISM)
- Project Services
- Consulting

- Education & Training
- Software Products

A breakdown of revenue, by service line, is shown in Exhibit 2.

Exhibit 2

Cap Gemini America Outsourcing Source of Revenue Summary

Service Line	Year	
	1996	1995
	Percent of Total Revenue	Percent of Total Revenue
Project Services	68%	57%
Consulting	15%	27%
ISM	13%	10%
Software Products	1%	4%
Education & Training	3%	2%
Total	100%	100%

Source: Cap Gemini America

Key Services

Cap Gemini offers clients a customized blend of any of the following services to meet each of the client's unique needs:

Strategic IT Outsourcing Services covers all of the following services towers:

- Program Management Office (PMO)
- Application Management (AM)
- Distributed Computing Services (DCS)
- Help Desk Services (HDS)
- Centralized Computing Services (CCS)
- Network Management Services (NMS)

Selective IT Outsourcing Services addresses specific services covered under total IT outsourcing:

- Facilities Management (FM or CCS)
- Application Management (AM)
- Distributed Computing Services (DCS)
- Help Desk Services (HDS)

Specialty Outsourcing Services covers total IT outsourcing services required for specific packaged software:

- SAP Outsourcing Services (Systems Management or Run Services)

Strategic IT Outsourcing Services

Cap Gemini's strategic IT outsourcing services include the following:

- Program Management Office (PMO)
 - IT Strategy & Planning
 - Information Architecture
 - Tools and Methodologies
 - Communications Management
 - Quality Management
 - Contracts Management
 - Vendor Management
 - Financial Management
 - Service Management
 - Client Relationships

- Applications Management (AM)

- Application Enhancements
- Application Maintenance
- Application Production Support
- Application User Support
- Logical DBA Services
- Data Modeling Services
- Data Warehousing Services
- Electronic Data Interchange
- Internet/Intranet Solution
- Level 2 Help Desk
- Service Management

- Distributed Computing Services (DCS)

- Service Management
- Asset Management
- Configuration Management
- Procurement and Deployment
- Moves/Adds/Changes
- Equipment Maintenance
- Software Distribution
- Client/Server Computing
- Training
- Technical Consulting
- Level 2 Help Desk
- Service Management

- Centralized Computing Services (CCS)

- Mainframe Computing
- Midrange Computing
- Service Management
- Physical DBA Services
- Storage Management Services
- Print/Distribution Services
- Data Communications Services
- Security Services
- Disaster Recovery Services
- Capacity Planning Services
- Computing Environments
- System Software Maintenance
- Technical Support
- Tools Administration/Support
- Level 2 Help Desk
- Service Management

- Help Desk Services (HDS)

- Total Call Management
- Problem Management
- Level 1 Help Desk
- Call Logging/Tracking
- Call Priority Setting
- Call Classification and Assignment
- Call Dispatching and Escalation

- Call Status Monitoring
- Call Closure and Follow-up
- Call Reporting
- Service Management
- Network Management Services (NMS)
 - Network Operations Center (NOC)
 - WAN Management Services
 - LAN Management Services
 - Voice Communications Services
 - E-Mail/Groupware Services
 - Internet/Intranet Services
 - Level 2 Help Desk
 - Service Management

Beginning in 1995, Cap Gemini America initiated a strategy to become a leader in transformational IT outsourcing in the U.S. To this end, Cap Gemini America offers a dual-mission customer service approach.

- The first mission of the contract concentrates on Cap Gemini America operating its customer's computer systems in more cost-effective ways, allowing the customer to focus on its business.
- The second mission of the contract focuses on Cap Gemini America upgrading the client's systems to more modern distributed systems. This upgrade allows for greater flexibility in matching the client's business requirements.
- This dual mission contract creates a solution that attains the client's short-term goals, in addition to positioning the client's business for the future.

Clients

Cap Gemini is providing strategic IT outsourcing services for a number of clients including Ralcorp Holdings, Inc., Western Digital Corporation, and the U.S. Chamber of Commerce. Many clients have turned to Cap Gemini for selective outsourcing services, including Rubbermaid and J.P. Morgan. Cap Gemini also has a solid track record in delivering specialty SAP outsourcing services to global companies such as Zeneca, Montell Europe, and KaVo.

Examples of Outsourcing Contracts

- In April 1997, Cap Gemini America was awarded a 10-year, \$75 million dollar transformational outsourcing contract with the United States Chamber of Commerce (USCC).
 - Cap Gemini America will manage USCC's computer operations, providing outsourcing services and advanced technology solutions to enable USCC to focus on its core business of advancing American private enterprise.
 - Applying the company's Applications Management, Distributed Computing, Facilities Management, and Business Process Outsourcing services, Cap Gemini America will support the USCC's current systems while simultaneously developing new systems, which the company will later support and enhance.
- In August 1996, Western Digital Corporation selected Cap Gemini America as its "best-of-breed" IT provider to perform program management and application development, maintenance, and support services.
 - Cap Gemini's activities include strategic planning, quality assurance and control,

establishment of standards, methodologies, processes and procedures, new application development, application maintenance, and support.

- Cap Gemini America will work in partnership with Wang/I-NET, which is responsible for managing Western Digital's data center, network, and desktop services.
- In April 1995, Cap Gemini America and its alliance partners, The GENIX Group (now

Exhibit 3

ACS) and I-NET (now Wang/I-NET), won a contract for more than \$100 million from Ralcorp Holdings, Inc. According to the agreement, Cap Gemini America is providing overall program management for the partnership and is providing Ralcorp's business systems planning, transformation, and management services.

A sampling of representative 1995-1996 outsourcing contracts is provided in Exhibit 3.

Representative 1995-1996 Cap Gemini America Outsourcing Contracts

Client	Industry	Award	Outsourcing Type	Duration
Ralcorp Holdings, Inc.	Foods Manufacturing	\$100 million	Applications Operations	5 years
Western Digital Corporation (WDC)	Hi-Tech Manufacturing	\$60 million	Applications Operations	3 years
United States Chamber of Commerce (USCC)	Public Sector	\$75 million	Business Operations	10 year
Total Petroleum	Process Manufacturing	\$6 million	Applications Operations	5 years

Source: INPUT Outsourcing Contracts Database;
Cap Gemini America

Competitors

Outsourcing competitors include Andersen Consulting, EDS, Computer Sciences Corporation, and IBM/ISSC.

Key Differentiators

Cap Gemini differentiates itself from the competition through the following unique qualities or services:

- Cap Gemini has been ranked #1 in Europe, by revenue, in applications management for the past 20 years.
- Cap Gemini is the only American company in the IT industry to achieve ISO 9001-

quality certification for all domestic services.

- Cap Gemini offers flexible service packages and contractual agreements specifically tailored to the customer's need.
- Cap Gemini's PERFORM quality system and On Time and Above Client Expectations (OTACE) delivery methodology assures smooth system transformation. Cap Gemini America provides guaranteed and "living" service level agreements.

- Cap Gemini's focus is on people. The company offers unique skill and career development, with a focus on quality of life.
- Cap Gemini's System Transformation program aligns IT with the strategic objectives of the client's business.

Alliances

Cap Gemini America has agreements with the following outsourcing service vendors: Affiliated Computer Services (ACS), Financial Technologies, AT&T Network Services, Vanstar, Lucent Technologies, M/C Leasing, and Unisource Systems, Inc.

Other alliance partners include Microsoft, Baan, SAP, Oracle, PeopleSoft, Computervision, and Computron.

Parent Company

CAP GEMINI S.A.
11 rue de Tilsitt
75017 Paris, France
Tel: 33 (1) 47 54 50 00

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

June 1997

Cap Gemini America

1114 Avenue of the Americas
29th Floor
New York, NY 10036-6710

Phone: (212) 944-6464

Fax: (212) 719-5346

Internet: <http://www.usa.capgemini.com>

President & CEO:	Mike Meyer
Status:	Subsidiary
Parent:	Cap Gemini S.A.
Employees:	3,000 (U.S. 6/97)
Revenue:	\$325,000,000
Fiscal Year End:	12/31/96

Key Points

- Cap Gemini America is a member of the Cap Gemini S.A. group, and offers a range of strategic information technology transformation and integration services.
- As of April 1, 1997, Mike Meyer, formerly Executive Vice President with Cap Gemini America, replaced Michel Berty as President and CEO. Michel Berty, one of the original founders of the Cap Gemini Group, announced his retirement after more than 25 years with the company.
- In April 1997, Cap Gemini America and PenOp, Inc. announced an alliance under which Cap Gemini America will integrate PenOp's signature capture and recognition software with the Documentum Enterprise Document Management System (EDMS) technology.
- In January 1997, Cap Gemini America opened a U.S. Oracle National Practice within its Package Based Solutions division.
- In July 1996, Cap Gemini America's Package Based Solutions practice opened a new Baan National Practice Center to support the Baan Company's product suite.
- In September 1996, Cap Gemini America adopted the new Cap Gemini logo, now used by all Cap Gemini companies.

Company Description

Cap Gemini America is a leading provider of IT consulting and systems integration services.

The Cap Gemini Group works with clients to enable them to run their businesses better by developing knowledge-based solutions that address their most critical issues. The company works in partnership with clients, helping them manage change and strategically prepare for the future. Cap Gemini Group helps clients with the challenge of improving the way they manage their businesses, enabling them to overcome uncertainty in an era of intense competition and accelerating change.

In 1994, Cap Gemini America was awarded the ISO 9001 certification for the study, design, implementation, and maintenance of information systems.

Cap Gemini America was incorporated in the U.S. in January 1981.

Organization and Structure

Cap Gemini America is the U.S. subsidiary of Cap Gemini S.A., one of Europe's largest information technology companies. Cap Gemini America is responsible for the worldwide coordination of Cap Gemini S.A.'s Process Sector, which covers the oil, gas, and chemical industries.

- Cap Gemini S.A. (formerly CAP Gemini Sogeti) was founded in 1975 by the joining of three information technology services and consulting companies: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. to support the establishment of software houses in Europe; and the Sogeti Group, formed in 1967 to provide consulting in the

design and implementation of software applications.

- In May 1996, the name of the holding company, Cap Gemini Sogeti, was changed to Cap Gemini S.A. Under the new structure, one company (Cap Gemini) is the holding company for all the local country companies, in addition to Gemini Consulting, and 20% of debris Systemhaus.
- Headquartered in Paris, Cap Gemini S.A. had 25,950 employees as of December 31, 1996, and 1996 worldwide revenue of approximately \$2.9 billion. Including revenue from Gemini Consulting, Cap Gemini S.A. is one of the largest systems integrators in the world.
- Cap Gemini S.A. consists of eight Strategic Business Areas (SBAs). In addition to each SBA's geographic sales and delivery responsibility, each provides a center of vertical market core competence to facilitate service to a specific vertical industry. Expertise is coordinated through competency centers located in each SBA.
- The geographic areas and associated vertical industries for Cap Gemini S.A.'s SBAs are as follows:
 - SBA 1—U.S.: Process industries (oil, gas, and chemicals)
 - SBA 2—U.K. and Ireland: Finance
 - SBA 3—Nordic Countries: Utilities
 - SBA 4—Benelux: Consumer Products, Retail, and Distribution
 - SBA 67—France and Southern Europe: Manufacturing (automobile)
 - SBA 8—Asia

Cap Gemini America is organized into five divisions—Central, East, Midwest, Southeast, and West, which have a total of 32 units. Division managers are in charge of their units, overseeing the sales and delivery of service offerings.

- Sales & Development is a complementary organization designed to support Operations with skilled specialists in higher value-added services such as package-based solutions, outsourcing, and advanced technologies (Internet and data warehousing).
- Corporate Administration/Support is Cap Gemini America's group consisting of support units, including Marketing Communications, Human Resources, Finance, and Legal. The Corporate Administration/Support group reports directly to the CEO, Mike Meyer.

Headquartered in New York City, Cap Gemini America has office locations in Akron, Cincinnati, Cleveland, and Dayton (OH), Atlanta (GA), Baltimore (MD), Chicago (IL), Columbus (GA), Dallas and Houston (TX), Delaware Valley (PA), Denver (CO), Des Moines (IA), Detroit and Grand Rapids (MI), Iselin (NJ), Kansas City (KS), Appleton, Madison, Milwaukee, and Wausau (WI), Ft. Lauderdale, Orlando, and Tampa (FL), Minneapolis (MN), Omaha (NE), Philadelphia and Pittsburgh (PA), Portland (OR), Richmond (VA), Seattle (WA), St. Louis (MO), and Washington, D.C.

In January 1997, Cap Gemini America opened the U.S. Oracle National Practice within its Package Based Solutions division, in Houston (TX). This practice center began with 20 Oracle applications consultants and expects to increase to 150 dedicated consultants in the U.S. by the end of 1997.

In December 1996, Cap Gemini America opened an office in Washington, D.C. dedicated solely to the support of the company's partnership with the United States Chamber of Commerce.

In July 1996, Cap Gemini America established a Baan National Practice in Grand Rapids (MI), which included a demonstration center equipped with hardware platforms running Baan's family of business application software. The center is used for demonstrations, testing, education, training, and technical support.

- Employing more than 40 consultants, this group is dedicated to the support of Cap Gemini S.A.'s worldwide alliance with The Baan Company by serving Baan's North American customers.
- The new Baan National Practice includes a demonstration center used for demonstrations, testing, education, training, and technical support.

Employees

As of December 31, 1996, Cap Gemini America had approximately 3,000 employees in the U.S., compared to 2,700 one year prior.

Company Strategy

Cap Gemini America and its parent company, Cap Gemini S.A., continue to move from contract programming to large-scale systems transformation projects. Cap Gemini America has continued its migration toward larger projects, such as the Bridgestone/Firestone business and system transformation contract, and its focus on vertical market expertise.

Cap Gemini America uses a best-of-breed approach in the delivery of its services by leveraging its cumulative expertise and

partnering with best-of-class partners to ensure delivery of quality services.

Cap Gemini S.A.'s unique Concurrent TransformationSM service combines business process transformation and systems implementation for total conversion of systems.

Exhibit 1

**Cap Gemini America
Five-Year Revenue Summary
(\$ Millions)**

Item	Fiscal Year				
	1996	1995	1994	1993	1992
Revenue	\$325	\$263	\$197	\$173	\$183
• Percent change from previous year	24%	34%	14%	(5%)	(10%)

Cap Gemini America management attributes the turnaround in revenue during the last two years to the continued migration to large-scale systems transformation projects and expects the trend to continue.

Revenue Analysis by Product / Service Mode

One hundred percent of Cap Gemini America's revenue is derived from its systems transformation services.

Market Financials

Cap Gemini America provides services primarily to Fortune 500 and midsized businesses in a range of industries.

Cap Gemini America's revenue is derived from the following industry sectors, as indicated:

Financials

Cap Gemini America's 1996 revenue was approximately \$325 million, up 24% from \$263 million in 1995.

A five-year revenue summary is shown in Exhibit 1.

Financial services	28%
Manufacturing	21%
Telecommunications	13%
Retail and distribution	23%
Process industries	7%
Travel and tourism	2%
Government and public services	3%
Utilities	<u>3%</u>
	100%

Geographic Markets

Virtually 100% of Cap Gemini America's revenue is derived from the U.S.

Key Products and Services

Cap Gemini America's main focus is centered around six strategic offerings:

- TransMillenniumTM Services
- Package-Based Solutions (PBS)

- Advanced Technology Services (ATS)
- Information Technology Excellence (IT^x)
- Information Systems Management (ISM)
- Customer Care and Billing

Cap Gemini America has expertise in all types of conversions, as well as a range of technical capabilities and project management skills, including:

- Project management methodologies using *PERFORM*SM, Cap Gemini S.A.'s comprehensive set of standards, procedures, methods, techniques, and tools
- Application design, development, and documentation
- System conversions and migrations
- Software engineering
- Application maintenance

The following is a summary of Cap Gemini America's six strategic offerings:

TransMillenniumTM Services & Licensing

In March 1995, Cap Gemini America introduced its "TransMillennium Services" solution that uses its artificial intelligence-based ARCdriveSM toolset to renovate applications affected by the Year 2000 date problems.

- The services include assessment, strategy, applications renovation, testing, and implementation.
- Cap Gemini America has more than 200 complete and active service engagements for more than 120 Year 2000 clients in a variety of industries.

- Cap Gemini America's Application Renovation Center (ARC), located in Tarrytown (NY), is staffed by dedicated teams and supported by A1-based tools.
- In 1995, the company expanded this offering throughout Cap Gemini S.A. as a transnational offering. Today there are ARCs in most European countries; over a million lines of code are renovated monthly.

In addition to the above services, TransMillennium Services also offers the company's proprietary methodology and smart technology in the form of a license agreement to clients and other service providers. The TransMillennium License product allows companies to solve the Year 2000 problem in-house with automated tools, methods, and a factory-based approach.

- The company's methodology is supported by the company's integrated toolset:
 - *Assess* analyzes the impact on the client's inventory, calculates the scope of the project, and estimates costs.
 - *Strategy* uses diagnostics to help determine whether to renovate, retire, rehost, redevelop, replace, or outsource each of the client's applications.
 - *Renovate* makes full use of automation using Cap Gemini America's ARCdrive toolset at the off-site ARC.
 - During *Validate*, Cap Gemini America performs two automated tests: the 19xx test, which ensures that the renovated programs maintain original functionality, and the 20xx test, which verifies that the programs will function past the Year 2000.

- *Implement*, the final phase, incorporates any changes made to production while the source was being renovated and tested.
- In 1996, Cap Gemini America trained more than 200 project managers and technical solutions architects in Year 2000 methods and procedures and 150 factory specialists to use the ARCDrive tools.

Package-Based Solutions (PBS)

The Package-Based Solutions division provides implementation services for Enterprise Resource Planning (ERP) systems, using strategic partners for integration of technology solutions. Implementation consulting services include program management and implementation, readiness assessment, change management, and outsourcing.

This division's range of package-related consulting services include:

- Business transformation
- Package integration
- Training

Cap Gemini America provides support for SAP, Baan, Oracle, PeopleSoft, and Computron products.

The company is an SAP Global Logo Partner and has been an authorized Baan Partner since 1994. In May 1997, Cap Gemini was selected by Baan as a 1996 recipient of the Gold Partner Award.

Advanced Technology Services (ATS)

The Advanced Technology Services group assists organizations in using the latest proven technology to transform both the

business and the ways in which it is conducted.

ATS's services are provided through offerings in three major areas of current technology:

- **Architecture**—This service offering provides specifications for hardware, software, service and support, and how the products and services will be provided. To determine the technology required, ATS uses its methodology for representing infrastructure that is now adopted by IEEE as Industry Standard POSOX 1003.23.
- **Business Intelligence**—This offering integrates the organization's strategic vision with the gathering, processing, and analysis of data into a system that includes a company-wide value chain perspective.
- **Internet/Intranet**—ATS helps organizations make quick and efficient transitions to become Web-enabled enterprises. The service begins with a two-day visioning workshop to examine possibilities and identify new business opportunities. Technology required to improve the business is reviewed and the system is designed and implemented. The group can also assist in change management, where appropriate. The final step involves transferring technology to the client or assisting in outsourcing.

Information Technology Excellence (IT^{EX})

This group helps IT organizations improve their effectiveness through measurement, diagnostic, and benchmarking services via two offerings: Quickstrike Services and Measurement Services.

- Quickstrike is a rapid analysis and diagnostic service addressing all aspects of IT maintenance and development.
- Quickstrike diagnostics are used to develop a quantitative baseline of the organization, focusing on the applications portfolio, management practices, business factors, technical infrastructure, the IT organization, and the delivery process.
- The IT^x group maintains a comprehensive database containing information for benchmarking against trends in productivity, quality, software process maturity, use of tools and techniques, and overall IT performance.
- Measurement Services provide help with the design and implementation of measurement programs. Cap Gemini America's approach includes the following elements:
 - The Audience Analysis methodology helps design the measurement program to align with the culture and goals of the organization.
 - Development of "measurement dashboards," a group of related graphs that detail the selected metrics to be used in gauging performance, goals, and objectives
 - Review of existing tracking systems and assessment of their capability to provide data for supporting the dashboards
 - Implementation of the measurement program

Information Systems Management (ISM)
Information Systems Management (ISM) is Cap Gemini America's service offering that

provides the majority of the firm's outsourcing activities. Services include desktop support, central helpdesk, infrastructure management, legacy facilities and applications management, wide-area network services, and business process outsourcing.

Outsourcing contracts may be "standalone" or part of an integrated outsourcing contract covering development and operations, or part of a Concurrent TransformationTM contract covering business and systems.

Service offerings include the following:

- Applications management
- Consulting (Process Development)
- Projects (Innovative Systems Development)
- Distributed computing services
- Centralized computing services
- Network services

Customer Care and Billing

Cap Gemini America's Customer Care and Billing (CC&B) provides systems integration services for the PCS, cellular, and ESMR markets. Cap Gemini has traditionally provided CC&B services for European telecom and media companies.

Cap Gemini America builds interfaces between package-based CC&B systems and banks, credit bureaus, management support systems, and a full range of wireless network elements. The company also offers consulting in configuring a variety of systems for business environments. Cap Gemini America assumes overall responsibility for the billing system and its full integration with the client's business and existing infrastructure.

Marketing and Sales

The company's reorganization in 1995 formalized the Corporate Administration/Support and Sales & Development groups, which report directly to the CEO. The groups' functions are to support the Operations group and to further the migration to more value-added projects and services.

The company has business partnerships with various vendors that allow Cap Gemini America to perform in both prime and subcontractor roles in systems transformation projects.

Cap Gemini America has agreements with the following companies:

- Hardware vendors—IBM, Sun Microsystems, Dell Computers, NEC, Hewlett-Packard, Digital Equipment Corporation, NeXT, and Compaq
- Software vendors—Microsoft, Oracle, Informix, Sybase, SAP, PeopleSoft, Dun & Bradstreet, qad, Computron, Documentum, Novell, Parc Place, Platinum Software, PSDI, Sherpa, FileNet, Baan, Novell, and Sterling Software
- Industry market leaders—The Foxboro Company, Allen-Bradley, and POSC
- Service vendors—ATEC Technical School, ACS, I-Net, ISSC, and Vanstar

Clients

A sampling of Cap Gemini America's clients include AKZO Chemical Company, Allstate, ARCO, Arrow, Bell South, Blue Cross/Blue Shield, Compaq, Coors, Dutch State Mining, Exxon, Ford Motor Company, The Foxboro Company, General Electric, Goodrich, Shell, Goodyear, IBM, National Football League

Players Association, Mercedes-Benz Credit Corporation, Merrill Lynch, Nike, Petrotechnical Open Software Corporation, The Prudential, Ralcorp, the U.S. Chamber of Commerce, and USAA.

Some significant contracts awarded to Cap Gemini America are described below.

- In June 1997, Cap Gemini America and GTE Data Services, Inc. entered into a licensing agreement to provide GTE with the TransMillennium™ License to provide systems solutions to its internal and external customers for Year 2000 date change work.
- In May 1997, Cap Gemini America and Gemini consulting announced a two-year contract with Bridgestone/Firestone, Inc. for business and systems transformation services to create a competitive advantage for Bridgestone/Firestone in its business relationships through supply chain enhancements. Cap Gemini America and Gemini Consulting are using "concurrent transformation" to simultaneously transform the business processes and implement an integrated system solution that includes an ERP system and Advanced Planning Software.
- In April 1997, Cap Gemini America was awarded a 10-year, \$75 million transformational outsourcing contract with the United States Chamber of Commerce (USCC). Under the terms of the agreement, Cap Gemini America will manage USCC's computer operations, providing applications management, distributed computing, facilities management, central help desk services, infrastructure management services, mainframe applications support, legacy applications management services, WAN

services, and business process outsourcing services.

- For a North American customer, Cap Gemini America is helping to leverage early European Bann experience across the U.S.
- Northern Trust Company of Chicago, the principal subsidiary of Northern Trust Corporation, also has a licensing agreement with Cap Gemini America for its TransMillennium™ License product.
- For a Canadian customer, Cap Gemini America is helping to design the company's next Baan implementation phase in Europe.
- Cap Gemini America and its alliance partners, The GENIX Group and I-Net, won a contract for more than \$100 million from Ralcorp Holdings, Inc. According to the agreement, Cap Gemini America will provide overall program management for the partnership and will provide Ralcorp's business systems planning, transformation, and management services.
- The Ras Laffan Liquid Natural Gas refinery selected the alliance of Cap Gemini and The Foxboro Company to design and implement an information system that will integrate all operations—from the wellhead to the finished product.
 - The concept of implementing the information system before the construction of the refinery is a first for the petroleum industry.
 - This idea supports the concept that an information system can speed and support the construction of a refinery by eliminating the duplication of databases,

automating the documentation management, and directing the project management of the construction.

- Cap Gemini America designed a client/server system for the Mercedes-Benz Credit Corporation that provides on-line access, rapid response, and high-reliability information exchange.
- Cap Gemini America was awarded the SAP implementation for The Foxboro Company's worldwide operations. After prototyping the system in the U.S., the traveling team of Foxboro and Cap Gemini America employees has been implementing the system in Italy, Germany, Singapore, and the U.S.

Alliances

A sample of significant alliances formed by Cap Gemini America during the last few years includes the following:

- In April 1997, Cap Gemini America and PenOp, Inc. announced an alliance under which Cap Gemini America will integrate PenOp's Biometric Token signature capture and recognition software with the Documentum Enterprise Document Management System (EDMS) technology. Cap Gemini America offers integrated document management and work flow solutions using Documentum, Inc.'s EDMS as the foundation platform. Cap Gemini has also become a preferred integration partner of PenOp
- In March 1997, the Cap Gemini Group and The Portal Information Network announced an international agreement under which the Cap Gemini Group will market Portal's Infranet™ software platform to Internet service providers (ISPs), on-line services, and businesses

building corporate intranets. Under the terms of the agreement, Cap Gemini will implement and support Infranet and customize the platform to customer requirements via competency centers throughout the U.S., Europe, and global markets.

- In March 1997, Cap Gemini America and USDATA announced an alliance under which the two companies will provide vertically integrated IT systems for the manufacturing industry. Cap Gemini America will further enhance its capabilities in factory floor-to-front office information integration through proactive utilization of USDATA's FactoryLink Enterprise Control System™ (ECS). USDATA will offer improved customer service by leveraging Cap Gemini America's consulting capacity.
- Cap Gemini America is a "Partner" within the Microsoft Solution Provider Program, which jointly markets Microsoft-based systems integration solutions. The partner level is the highest level of participation in the program.
- Cap Gemini America developed a close working alliance with The Foxboro Company to pursue large integrated projects such as that for the Ras Laffan LNG refinery. The alliance is currently pursuing other international projects.
- Cap Gemini America's Package-Based Solutions unit supports Oracle, PeopleSoft, and Computron, in addition to SAP. The unit expanded from its Houston office in 1996 by opening an office with more than 40 employees in Grand Rapids (MI) to support The Baan Company.

Competition

Cap Gemini America competes with large U.S. information technology consulting companies, including Andersen Consulting, Electronic Data Systems, Computer Sciences Corporation, and IBM (ISSC).

INPUT Assessment

Cap Gemini America's strengths include:

- Experience managing complex and/or large projects
- Experience managing transnational projects
- The *PERFORM*SM set of standards, procedures, methods, techniques, and tools through which Cap Gemini America ensures quality on all its projects
- ISO 9001 certification for the study, design, implementation, and maintenance of information systems
- Operating as part of a diversified team (partnering with the client's resources)

Challenges for the coming year include:

- Discovering technical resources
- Maintaining the explosive growth of the Year 2000 projects

Parent Company
Cap Gemini S.A.
11 rue de Tilsitt
75017 Paris, France
Tel: 33 (1) 47 54 50 00

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1996

CAP GEMINI America

Chairman & CEO: Michel Berty
1114 Avenue of the Americas
29th Floor
New York, NY 10036-6710
Phone: (212) 944-6464
Fax: (212) 819-1715



Status:	Subsidiary
Parent:	CAP GEMINI S.A.
Employees:	2,700 (U.S. 12/95)
Revenue:	\$263,000,000
Fiscal Year End:	12/31/95

Key Points

- CAP GEMINI America is a member of CAP GEMINI S.A., and offers a range of strategic information technology transformation and integration services.
- In July 1996, CAP GEMINI America announced the establishment of the Baan National Practice to support CAP GEMINI S.A.'s alliance agreement with The Baan Company.
- In June 1996, working with its strategic partner, The Foxboro Company, CAP

GEMINI America was awarded the Ras Laffan Liquid Natural Gas project to design and implement a completely integrated information system for a refinery.

- During 1995, CAP GEMINI America reorganized into three functional groups—Operations, Sales & Development, and Corporate Administration/Support.
- In April 1995, Ralcorp Holdings, Inc. awarded CAP GEMINI America a five-year systems transformation and outsourcing contract.
- In 1995, CAP GEMINI America's Package-Based Solutions unit expanded its offering to include SAP, Baan, Peoplesoft, and Computron.

- In September 1994, CAP GEMINI America became the first U.S. systems integrator to receive ISO 9001 Certification from the International Standards Organization (ISO).

Company Description

CAP GEMINI America provides information systems services in the areas of consulting, project management, systems planning, and systems development; legacy systems management, maintenance, enhancement and renovation services; and packaged software implementation.

CAP GEMINI America was incorporated in the U.S. in January 1981.

Organization and Structure

CAP GEMINI America is the U.S. subsidiary of CAP GEMINI S.A., one of Europe's largest information technology companies. CAP GEMINI America is responsible for the worldwide coordination of CAP GEMINI S.A.'s Process Sector, which covers the oil, gas, and chemical industries.

- CAP GEMINI S.A. (formerly CAP Gemini Sogeti) was founded in 1975 by the joining of three information technology services and consulting companies: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. to support the establishment of software houses in Europe; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
- In May 1996, the name of the holding company, Cap Gemini Sogeti, was changed to CAP GEMINI S.A. Under the new structure, one company (CAP GEMINI) is the holding company for all the local country companies, in addition to Gemini Consulting, and 20% of debis Systemhaus.

- Headquartered in Paris, CAP GEMINI S.A. had 22,079 employees as of December 31, 1995, and 1995 worldwide revenue of approximately \$3 billion. Including revenue from Gemini Consulting, CAP GEMINI S.A. claims to be the third largest systems integrator in the world.

- CAP GEMINI S.A. consists of eight Strategic Business Areas (SBAs). In addition to each SBA's geographic sales and delivery responsibility, each provides a center of vertical market core competence to facilitate service to a specific vertical industry. Expertise is coordinated through competency centers located in each SBA.
- The geographic areas and associated vertical industries for CAP GEMINI S.A.'s SBAs are as follows:

- SBA 1—U.S.; Processing (oil, gas, and chemicals)
- SBA 2—U.K.; Finance
- SBA 3—Nordic Countries; Utilities
- SBA 4—Benelux; Consumer Products, Retail, Distribution
- SBA 5—Germany; Government and Public Services
- SBA 6—France; Telecommunications and Media
- SBA 7—Southern Europe; Manufacturing
- SBA 8—Far East (Singapore); To be determined

CAP GEMINI America has reorganized from five divisions—Central, East, South, West, and Midwest—into three functional groups:

- Operations consists of six Divisions—Central, East, Southwest, Southeast, Midwest, and West—and 32 offices. The six Division Managers are in

charge of the units, overseeing the sales and delivery of service offerings.

- Sales & Development is a complementary organization designed to support Operations with skilled specialists in higher value-added services such as package-based solutions, outsourcing, and advanced technologies (Internet and data warehousing).
- Corporate Administration/Support is CAP GEMINI America's new group consisting of support units, including Marketing Communications, Human Resources, Finance, and Legal. The Corporate Administration/Support group reports directly to the CEO, Michel Berty.

Headquartered in New York City, CAP GEMINI America has office locations in Akron, Cincinnati, Cleveland, and Dayton, (OH), Atlanta (GA), Baltimore (MD), Chicago (IL), Columbus (GA), Dallas and Houston (TX), Delaware Valley (PA), Denver (CO), Des Moines (IA), Detroit and Grand Rapids (MI), Iselin (NJ), Kansas City (KS), Appleton, Madison, Milwaukee, and Wausau (WI), Jacksonville, Miami, Orlando, and Tampa (FL), Minneapolis (MN), Omaha (NE), Philadelphia and Pittsburgh (PA), Portland (OR), Richmond (VA), Seattle (WA), St. Louis (MO), and Washington D.C.

In July 1996, CAP GEMINI America established a new National Practice in Grand Rapids (MI).

- Employing more than 40 consultants, this group is dedicated to the support of CAP

GEMINI S.A.'s worldwide alliance with The Baan Company by serving Baan's North American customers.

- The new Baan National Practice includes a demonstration center used for demonstrations, testing, education, training, and technical support.

Company Strategy

CAP GEMINI America and its parent company CAP GEMINI S.A. continue to move from contract programming to large-scale systems transformation projects. CAP GEMINI America has continued its migration toward larger projects, such as the Ralcorp transformation and outsourcing contract, and its focus on vertical market expertise.

CAP GEMINI America uses a best-of-breed approach in the delivery of its services by leveraging its cumulative expertise and partnering with best-of-class partners to ensure delivery of quality services.

CAP GEMINI S.A.'s unique Concurrent TransformationSM service combines business process transformation and systems implementation for total conversion of systems.

Financials

CAP GEMINI America's 1995 revenue was approximately \$263 million, up 34% from \$197 million in 1994. The company anticipates at least 15% revenue growth in 1996.

A five-year revenue summary is shown on the following page.

CAP GEMINI America
Five-Year Revenue Summary
(\$ Millions)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	\$263	\$197	\$173	\$183	\$203
• Percent change from previous year	34%	14%	(5%)	(10%)	(8%)

CAP GEMINI America management attributes the turnaround in revenue during the last two years to the continued migration to large-scale systems transformation projects, and expects the trend to continue.

Revenue Analysis by Product/Service

One hundred percent of CAP GEMINI America's revenue is derived from its systems transformation services.

Market Financials

CAP GEMINI America provides services primarily to Fortune 500 and midsized businesses in a range of industries.

CAP GEMINI America's revenue is derived from the following industry sectors:

Financial services.....	24%
Manufacturing.....	21%
Telecommunications.....	13%
Retail and distribution.....	13%
Process industries.....	11%
Travel and tourism.....	8%
Government and public services.....	5%
Utilities.....	5%
	100%

Geographic Markets

Virtually 100% of CAP GEMINI America's revenue is derived from the U.S.

Employees

As of December 31, 1995, CAP GEMINI America had approximately 2,700 employees in the U.S.

Key Products and Services

CAP GEMINI America (and CAP GEMINI) defines its current operations along five lines of business:

- Consulting
 - Information technology consulting
 - Application consulting
- Project services
 - Project management
 - Systems integration
 - Innovative systems development (using technologies such as RAD and IAD)
 - Migration
 - Professional services
 - Package-based implementation
- Information systems management
 - Applications management
 - Systems maintenance and enhancement
- Education and training
 - User training
 - Professional skills training
 - Technical training

- Software methodologies and tools

- Methodologies
- Tools

CAP GEMINI America has expertise in all types of conversions, as well as a range of technical capabilities and project management skills, including:

- Project management methodologies using *PERFORM*SM, CAP GEMINI S.A.'s comprehensive set of standards, procedures, methods, techniques, and tools.
- Application design, development, and documentation
- System conversions and migrations
- Software engineering
- Application maintenance

CAP GEMINI America's five business sectors offer the following services:

Process Industries

CAP GEMINI America is responsible for the worldwide leadership and coordination of this sector.

- The company actively supports POSC (Petrotechnical Open Software Corporation), a nonprofit standards organization dedicated to the exploration and production segment of the petroleum industry. CAP GEMINI America will expand its standards capability by working with NACS (National Association of Convenience Stores) to design the standards for this portion of the industry.
- CAP GEMINI America has been heavily involved in the formulation of the information systems for the petroleum processing segment of the petroleum

industry, as demonstrated by the recent award of the Ras Laffan LNG refinery project for a totally integrated refinery information system.

- The company is actively working in the sales and retail portion of the industry. CAP GEMINI America supports all systems of gas/petrol sales and retail companies, including point-of-sale (POS), credit card management, back-office, and supporting telecommunications systems.

Financial Services

CAP GEMINI America's Financial Services Group focuses on meeting the needs of financial clients by offering services related to banking, securities, insurance, trading systems, back-office operations, and risk management.

Consumer Goods

This group provides consulting and implementation support to retailers, distributors, and manufacturers of consumer goods. Service offerings could include implementing EDI, data warehouses, and distribution and sales systems.

Manufacturing

This sector supports the manufacturing cycle, from product design, material resource planning, plant automation, and shop floor control to product warehousing and distribution. This group has extensive experience in the automotive and steel industries.

Telecommunications

CAP GEMINI America provides information technology solutions that include Internet/intranet applications, telecommunications management systems, electronic mail systems engineering, local- and wide-

area network evaluation and design, customer care and billing, as well as tools, education, and training.

TransMillennium™ Services

In March 1995, CAP GEMINI America introduced its "TransMillennium Services" solution that uses artificial intelligence-based tools to renovate applications affected by the Year 2000 date problems.

- The services include assessment, strategy, applications renovation, testing, and implementation.
- In 1995, the company expanded this offering to all of CAP GEMINI S.A. as a transnational offering. Today there are Application Renovation Centers (ARCs) in most European countries; over a million lines of code are renovated monthly.

Clients

A sampling of CAP GEMINI America's clients include AKZO Chemical Company, Allstate, ARCO, Arrow, Bell South, Blue Cross/Blue Shield, Compaq, Coors, Dutch State Mining, Exxon, Ford Motor Company, The Foxboro Company, General Electric, Goodrich, Shell, Goodyear, IBM, National Football League Players Association, Mercedes-Benz Credit Corporation, Merrill Lynch, Nike, Petrotechnical Open Software Corporation, The Prudential, Ralcorp, and USAA.

Some significant contracts awarded to CAP GEMINI America are described below.

- In April 1995, CAP GEMINI America and its alliance partners, The GENIX Group and I-Net, won a contract for more than \$100 million from Ralcorp Holdings, Inc. According to the agreement, CAP GEMINI America will provide overall program management for the partnership and will

provide Ralcorp's business systems planning, transformation, and management services.

- The Ras Laffan Liquid Natural Gas refinery selected the alliance of CAP GEMINI and The Foxboro Company to design and implement an information system that will integrate all operations—from the wellhead to the finished product.
- The concept of implementing the information system before the construction of the refinery is a first for the petroleum industry.
- This idea supports the concept that an information system can speed and support the construction of a refinery by eliminating the duplication of databases, automating the documentation management, and directing the project management of the construction.
- CAP GEMINI America designed a client/server system for the Mercedes-Benz Credit Corporation that provides on-line access, rapid response, and high-reliability information exchange.
- CAP GEMINI America was awarded the SAP implementation for The Foxboro Company's worldwide operations. After prototyping the system in the U.S., the traveling team of Foxboro and CAP GEMINI America employees has been implementing the system in Italy, Germany, Singapore, and the U.S.

Marketing and Sales

The company's reorganization formalized the new Corporate Administration/Support and Sales & Development groups, which report directly to the CEO. The groups' functions are to support the Operations group and to

further the migration to more value-added projects and services.

The company has business partnerships with various vendors that allow CAP GEMINI America to perform in both prime and subcontractor roles in systems transformation projects.

CAP GEMINI America has agreements with the following companies:

- Hardware vendors—IBM, Sun Microsystems, Dell Computers, NEC, Hewlett-Packard, Digital Equipment Corporation, NeXT, and Compaq
- Software vendors—Microsoft, Oracle, Informix, Sybase, SAP, Peoplesoft, Dun & Bradstreet, qad, Computron, Documentum, Novell, Parc Place, Platinum Software, PSDI, Sherpa, FileNet, Baan, Novell, and Sterling Software
- Industry market leaders—The Foxboro Company, Allen-Bradley, and POSC
- Service vendors—ATEC Technical School, ACS, I-Net, ISSC, and Vanstar

Alliances

A sample of significant alliances formed by CAP GEMINI America during the last few years includes the following:

- CAP GEMINI America is a "Partner" within the Microsoft Solution Provider Program, which jointly markets Microsoft-based systems integration solutions. The partner level is the highest level of participation in the program.
- CAP GEMINI America developed a close working alliance with The Foxboro Company to pursue large integrated projects such as that for the Ras Laffan LNG

refinery. The alliance is currently pursuing other international projects.

- CAP GEMINI America's Package-Based Solutions unit has recently added Baan, Peoplesoft, and Computron to the existing offering that was previously exclusively SAP. The unit expanded from its Houston office by opening an office with more than 40 employees in Grand Rapids (MI) to support The Baan Company.

Competition

CAP GEMINI America competes with large U.S. information technology consulting companies, including Andersen Consulting, Electronic Data Systems, Computer Sciences Corporation, and IBM (ISSC).

INPUT Assessment

CAP GEMINI America's strengths include:

- Experience managing complex and/or large projects
- Experience managing transnational projects
- The *PERFORM*SM set of standards, procedures, methods, techniques, and tools through which CAP GEMINI America ensures quality on all its projects
- ISO 9001 certification for the study, design, implementation, and maintenance of information systems
- Operating as part of a diversified team (partnering with the client's resources)

Challenges for the coming year include:

- Discovering technical resources
- Maintaining the explosive growth of the Year 2000 projects

Parent Company
CAP GEMINI S.A.
11 rue de Tilsitt
75017 Paris, France
Tel: 33 (1) 47 54 50 00

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

September 1995

CAP GEMINI AMERICA

Chairman & CEO: Michel Berty
1114 Avenue of the Americas
29th Floor
New York, NY 10036-6710
Phone: (212) 944-6464
Fax: (212) 819-1715

Status:	Subsidiary
Parent:	CAP GEMINI SOGETI GROUP
Employees:	2,500 (U.S. only)
Revenue:	\$197,000,000
Fiscal Year End:	12/31/94

Key Points

- CAP GEMINI AMERICA (CGA) is a member of the CAP GEMINI SOGETI (CGS) Group and offers a range of strategic information technology transformation and integration services.
- In April 1995, Ralcorp Holdings, Inc. awarded CGA a five-year systems transformation and outsourcing contract.
- In March 1995, CGA introduced its new line of application renovation services—"TransMillennium™ Services".

- In September 1994, CGA received ISO9001 Certification from the International Standards Organization (ISO).

Company Description

CGA provides information systems transformation and integration services that include systems planning, client/server and object-oriented systems development; legacy systems management, maintenance, enhancement and renovation services; and package software implementation.

CGA was incorporated in the U.S. in January 1981.

Organization and Structure

CGA is the U.S. division of the CGS Group, one of Europe's largest information technology companies. CGA is responsible for the

worldwide coordination of CGS' process industries, which include the oil, gas and chemicals sector.

- CGS was founded in 1975 by the joining of three information technology services and consulting companies—CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. for supporting the establishment of software houses in Europe and the U.S.; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
- Headquartered in Paris, CGS has approximately 21,000 employees and annual worldwide revenues of approximately \$2 billion.
- CGS consists of seven Strategic Business Areas (SBAs). In addition to each SBA's geographic sales and delivery responsibility, each provides a center of vertical market core competence to facilitate service to a specific vertical industry through corresponding competency centers in each local SBA.

CGA is organized by centers of expertise. These competency centers are staffed with centralized groups of specialists possessing specific technical expertise.

CGA has focused on understanding business needs on a sector-by-sector basis. The company serves its targeted vertical markets through business sectors that include the following:

- Process Industries
- Financial Services sector
- Consumer Goods sector
- Manufacturing sector
- Telecommunications sector

CGA has reorganized its 35 business units into five divisions—Central, East, South, West and Midwest.

The five U.S. division managers are in charge of the units, and oversee sales and delivery of service offerings throughout their respective divisions.

Headquartered in New York, CGA has office locations in Akron, Appleton, Atlanta, Baltimore, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Dayton, Delaware Valley, Denver, Des Moines, Detroit, Grand Rapids, Houston, Iselin, Jacksonville, Kansas City, Madison, Miami, Milwaukee, Minneapolis, New York, Omaha, Orlando, Philadelphia, Pittsburgh, Portland, Richmond, Seattle, St. Louis, Tampa, Washington D.C. and Wausau.

Company Strategy

CGA and its parent company CGS have expanded from contract programming to large-scale systems transformation projects. CGA has migrated toward working on larger projects and has focused on developing vertical market expertise. CGA uses a best-of-breed approach in the delivery of its services and believes in leveraging its historic cumulative experience. CGA also forms partnerships with best-of-breed companies to deliver quality services.

CGA's strategy is to evaluate and identify client needs by understanding each client's business operations.

Financials

CGA's 1994 revenue was approximately \$197 million, up 16% from about \$170 million in 1993. The company anticipates a 15% revenue growth in 1995.

A five-year revenue summary appears on the following page.

CAP GEMINI AMERICA
Five-Year Revenue Summary
 (\$ Millions)

Item	Fiscal Year				
	1994	1993	1992	1991	1990
Revenue	\$197	\$170	\$200	\$210	\$225
• Percent increase (decrease) from previous year	16%	(15%)	(5%)	(7%)	2%

CGA management attributes the revenue decline during the past few years to the company's focus on restructuring its business operations.

One hundred percent of CGA's revenue is derived from its systems transformation services.

Market Financials

CGA provides services primarily to Fortune 500 and midsize businesses in a range of industries.

CGA's revenue is derived from the following industry sectors:

Process industries	11%
Manufacturing	22%
Telecommunications	13%
Financial services	24%
Administration and public safety	6%
Utilities	3%
Retail	13%
Travel and tourism	<u>8%</u>
	100%

Geographic Markets

Virtually 100% of CGA's revenue is derived from the U.S.

Employees

As of December 31, 1994, CGA had approximately 2,500 employees in the U.S.

Key Products and Services

CGA (and CGS) defines its current operations along five lines of business:

- Consulting
 - Information technology consulting
 - Application consulting
- Project services
 - Systems integration
 - Software development
 - Migration
 - Professional services
- Information systems management
 - Applications management
- Education and training
 - User training
 - Professional skills training
 - Technical training
- Software methodologies and tools
 - Methodologies
 - Tools

CGA has expertise in all types of conversions, as well as a range of technical capabilities and project management skills, including:

- Project management methodologies
- Application design, development and documentation
- System conversions and migrations
- Software engineering
- Applications maintenance

CGA's National Centers of Competency support client projects and include the following:

- Integrated Manufacturing Technology (IMT)
- Reengineering/Conversions
- Software Engineering
- Applications Management

CGA's five business sectors offer the following services:

Process Industries

CGA is responsible for the worldwide coordination of this sector. CGA supports point-of-sale, credit card management (CCM) and document management applications among the other services it offers to this industry.

Financial Services

CGA's Financial Services Group focuses on meeting needs of clients, including banking, securities, insurance, trading systems, back-office operations and risk management among other aspects.

Consumer Goods

This group provides consulting and implementation support to retailers, distributors and manufacturers of consumer

goods. Service offerings could include implementing EDI, building data warehouses, or planning and implementation for technology transformation.

Manufacturing

This sector supports the manufacturing cycle, from product design, material resource planning, plant automation and shop floor control, to product warehousing and distribution.

Telecommunications

CGA offers provides information technology solutions to the telecommunications industry. Services offered include telecommunications management systems, electronic mail system engineering, local and wide area network evaluation and design, customer care and billing as well as software tools, education and training.

Transmillennium Services

In March 1995, CGA introduced its "TransMillennium Services" solution that uses artificial intelligence-based tools to renovate applications affected by the Year 2000 date problems, and includes assessment, strategy, applications renovation, testing and implementation services.

Clients

Some of CGA's clients include Allstate, Arco, Arrow, Coors, Exxon, Ford Motor Company, General Electric, Goodrich, Shell, Goodyear, IBM, National Football League Players Association, Mercedes-Benz Credit Corporation, Merrill Lynch, Nike, Ralcorp and TOTAL Petroleum, Inc.

Some significant contracts awarded to CGA include:

- In April 1995, CGA and its alliance partners—The Genix Group and I-NET won

a \$100 million contract from Ralcorp Holdings, Inc. According to the agreement, CGA will provide overall program management for the partnership and will provide Ralcorp's business systems planning, transformation and management services.

- The National Football League Players Association (NFLPA) chose CGA to architect and implement a client/server system, including database, accounting, general office, networking and operating system software. In addition to managing the NFLPA's complete systems transformation, CGA also supported its former systems until the new systems were in place.
- CGA designed a client/server system for the Mercedes-Benz Credit Corporation that provides on-line access, rapid response and high reliability information exchange to support its information needs.
- TOTAL Petroleum outsourced its systems management to CGA. During the five-year contract, CGA provided applications management, computer operations, technical support, networking, communication and help desk services to TOTAL Petroleum.

Marketing and Sales

CGA is organized into five divisions—Central, East, South, West and Midwest, with 35 branch locations nationwide.

CGA has business partnerships with various vendors that allows CGA to perform in both prime and subcontractor roles in systems transformation projects. CGA has agreements with IBM, Bull, Wang, Carleton, Intersolv, NeXT, Novell and Hewlett-Packard, among others.

Alliances

A sample of significant alliances formed by CGA during the last two years include the following:

- CGA is a "Partner" within the Microsoft Solution Provider Program, which jointly markets Microsoft-based systems integration solutions. The partner level is the highest level of participation in the program.
- In September 1994, CGA entered into an alliance with CIMAGE Corp., whereby the two companies will offer joint services including implementation, integration and maintenance of their Electronic Document Management Systems (EDMS), to companies in the petrochemical, oil and gas industries.
- CGA has an agreement with FileNet, in the area of workflow software and imaging, to provide systems integration services to companies implementing imaging or workflow.

Competition

CGA competes with large U.S. information technology consulting companies, including Andersen Consulting, Electronic Data Systems, Computer Sciences and IBM (ISSC).

INPUT Assessment

CGA's strengths include:

- Experience managing complex or large projects
- Operating as part of a diversified team (partnering with the client's resources)
- Operating as a multinational team (partnering with CGS' worldwide resources)

- ISO9001 quality certification for the study, design, implementation and maintenance of information systems

Challenges for the coming year include:

- Efficiently managing resource growth
- Increasing speed of new service offering roll-out
- Keeping pace with the explosive demand for the Year 2000 solutions

Parent Company

CAP GEMINI SOGETI

Corporate Headquarters:
3, rue Malakoff - B.P. 206
38005 Grenoble Cedex 1
Tel: 33 76 59 63 00
France

General Management:
Place de l'Etoile - 11 rue de Tilsitt
75017 Paris
Tel: 33 (1) 47 54 50 00
France

CAP GEMINI AMERICA

1114 Avenue of the Americas
29th Floor
New York, NY 10036-6710
Phone: (212) 944-6464
Fax: (212) 819-1715

Chairman: Robert J. Sywolski
President: Michel Berty
Status: Subsidiary
Parent: CAP GEMINI SOGETI
Total Employees: 2,500
Total Revenue: \$200,000,000*
Fiscal Year End: 12/31/92

*Company estimate

Key Points

- CAP GEMINI AMERICA (CGA) is implementing changes in its strategy and business structure that are transforming the company from a "body shop" to an information technology consulting and professional services firm. The company is focused on developing ongoing partnerships with its clients to evaluate and identify their information systems needs, and formulate and implement appropriate solutions.
- CGA is migrating toward working on large projects and having a detailed understanding of business needs on a sector-by-sector basis. The company is forming Market Development Units to serve targeted vertical markets such as manufacturing, pharmaceuticals, telecommunications, and oil and gas.
- In addition to information services executives, CGA is targeting its marketing efforts to senior levels of management in corporate end user/departmental areas.
- CGA has also reorganized its 30 branch locations into four divisions--Central, East, South, and West.
- The restructuring is part of the move initiated by CGA's parent, CAP GEMINI SOGETI, to coordinate globally the operations of its many independent branches located in 16 countries. CAP GEMINI SOGETI has organized the branches into seven strategic business areas along industry sector/geographical lines to provide synergy and worldwide direction. The reorganization promotes partnering among regions in support of client projects.

**Company
Description**

CGA provides information technology consulting, project services, information systems management, education and training, software methodologies and tools, systems integration, software development, migration, and applications management services primarily to Fortune 500 and mid-sized businesses in a range of industries, including manufacturing, financial services, telecommunications, chemical/pharmaceuticals, utilities/energy, and oil and gas.

CGA was formed in January 1986 through the acquisition of the consulting division of CGA Computer, Inc., and the merger of its operations with CAP GEMINI DASD.

CGA is the U.S. division of CAP GEMINI SOGETI, one of Europe's largest information technology companies.

- CAP GEMINI SOGETI was formed in 1975 by joining three independent computer consulting firms: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. for supporting the establishment of software houses in Europe and the U.S.; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
- Headquartered in Paris, CAP GEMINI SOGETI has approximately 24,500 employees worldwide, and is currently organized into seven strategic business areas (SBAs). Combined operating revenue of CAP GEMINI SOGETI approached \$2 billion in 1992.
- The USA SBA's responsibility is for worldwide efforts in the oil and gas industry. Other CAP GEMINI SOGETI SBAs include U.K. (Financial Services), Nordic (Utilities), Benelux (Trade and Distribution), Germany (Industrial Engineering), Greater Paris (Telecommunications), and Southern Europe (Aerospace, Air, and Rail Transportation).

Sogeti (the parent of CAP GEMINI SOGETI) began its venture into the management consulting business with the formation of Gemini Consulting from the combination of three consultancies--United Research, the MAC Group, and Gamma International.

- Gemini Consulting combines MAC's strengths in strategy formulation and those of United Research and Gamma International in change management and organization.
- According to Sogeti management, the activity of the Gemini Consulting Group complements that of CAP GEMINI SOGETI in the conduct of their respective businesses and the services provided to clients.

Financials

CGA's 1992 revenue is estimated at \$200 million, a 5% decrease from 1991 revenue of approximately \$210 million. A five-year revenue summary follows:

**CAP GEMINI AMERICA
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1992	1991	1990	1989	1988
Revenue	\$200.0	\$210.0	\$225.0	\$220.0	\$165.0
Percent increase (decrease) from previous year	(5%)	(7%)	2%	33%	25%

CGA management attributes the revenue decline in the past two years to the company's focus on restructuring its business operations.

Competitors

CGA competes with the largest U.S. professional services companies, including Andersen Consulting, Electronic Data Systems, Computer Sciences Corporation, and IBM.

Key Products and Services

One hundred percent of CGA's revenue is derived its various information technology professional and systems integration services.

CGA (and its parent) defines its current operations along five lines of business:

- Consulting:
 - Information technology consulting
 - Application consulting
- Project services:
 - Systems integration
 - Software development
 - Migration
 - Professional services (supplemental resources)
- Information systems management:
 - Applications management

- Education and training:
 - End-user training
 - Professional skills training
 - Technical training
- Software methodologies and tools:
 - Methodologies
 - Tools

CGA's strategy is to evaluate and identify client needs by understanding each client's business operations.

CGA has expertise in all types of conversions, and a range of technical capabilities and project management skills, including:

- Project management methodologies
- Application design, development, and documentation
- System conversions and migrations
- Software engineering
- Applications maintenance

CGA considers its strengths to include:

- Managing complex or large projects
- Operating as part of a diversified team (partnering with the client's resources)
- Operating as a multinational team (partnering with CAP GEMINI SOGETI's worldwide resources)

CGA is organized geographically and by centers of expertise. CGA's National Centers of Competency support client projects and include the following:

- Integrated Manufacturing Technology (IMT)
- Re-engineering/Conversions
- Software Engineering
- Applications Management

CGA also has business partnerships with various vendors that allows CGA to perform in both prime and subcontractor roles in systems integration projects. CGA has various agreements with IBM, Bull, NCR, Wang, Carleton, Intersolv (Index Technology), Bachman, KnowledgeWare, NeXT, Novell, and Hewlett-Packard.

Some recent contracts completed by CGA include:

- Conducting a nine-month systems redesign for the U.S. plants of a worldwide chemical manufacturing company
- Developing software to control production of carbon and stainless steel bars for a manufacturer
- Designing and developing software, and implementing hardware to support a retailer's 3,000 worldwide outlets

Industry Markets

CGA derived its 1992 revenue from the following industry sectors:

Manufacturing	30%
Telecommunications	20%
Financial services	17%
Chemical, pharmaceutical, and health care	9%
Utilities and energy	8%
Food, beverages, tobacco, and retail	8%
Government	5%
Other	<u>3%</u>
	100%

Approximately 70% of the Fortune 100 are CGA clients.

About 60% of CGA business is through repeat clients. This percentage has decreased as CGA targets a broader range of clients.

Geographic Markets

CGA derived 100% of its 1992 revenue from the U.S.

CGA is organized into four divisions--Central, East, South, and West--with 30 branch locations nationwide.

COMPANY PROFILE

CAP GEMINI AMERICA

1114 Avenue of the Americas
29th Floor
New York, NY 10036-6710
(212) 944-6464

Robert J. Sywolski, Chairman and CEO
Stephen A. Carns, President and COO
Subsidiary of CAP GEMINI SOGETI
Total Employees: 3,000
Total Revenue, Fiscal Year End
12/31/90: \$225,000,000

The Company

CAP GEMINI AMERICA (CGA) provides information management consulting, complex system design and implementation, software installation and support, and computer training and operations primarily to Fortune 500 and midsize businesses in the banking and finance, insurance, telecommunications, manufacturing, and transportation industries. CGA is the U.S. division of CAP GEMINI SOGETI, an international group of professional services companies.

- CAP GEMINI SOGETI was formed in 1975 by joining three independent computer consulting firms: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. for supporting the establishment of software houses in Europe and the U.S.; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
- Headquartered in Paris, CAP GEMINI SOGETI has approximately 20,000 employees worldwide and is organized into four operational groups: CAP SESA, CAP GEMINI EUROPE, CAP GEMINI AMERICA, and Hoskyns (U.K.). Combined operating revenues of the groups reached \$1.7 billion in 1990.

Sogeti (the parent of CAP GEMINI SOGETI) began its venture into the management consulting business with the addition of United Research, the MAC Group, and Gamma International. Sogeti's Consulting Group combines MAC's strengths in strategy formulation and those of United Research and Gamma International in change management and organization.

- According to Sogeti management, the activity of the Consulting Group will increasingly complement that of CAP GEMINI SOGETI, both in terms of the conduct of their respective businesses (management consulting for Sogeti, and information

technology for CAP GEMINI SOGETI), and the services provided to clients.

CGA was formed in January 1986 through the acquisition of the consulting division of CGA Computer, Inc., and the merger of its operations with CAP GEMINI DASD.

CGA's 1990 revenue reached approximately \$225 million, a 2% increase over 1989 revenue of \$200 million. A five-year revenue summary follows:

**CAP GEMINI AMERICA
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1990	1989	1988	1987	1986
Revenue	\$225.0	\$220.0	\$165.0	\$132.0	\$93.0
• Percent increase from previous year	2%	33%	25%	42%	35%

CGA competes with professional services companies throughout the U.S.

Key Products and Services

One hundred percent of CGA's revenue is derived from professional and systems integration services. CGA services and their percent revenue contributions are as follows:

Contract programming	50%
System conversion	10%
System development	10%
Information technology consulting	10%
Systems integration	10%
Training/education	5%
Documentation	5%
	100%

From large-scale projects (where CGA takes total responsibility for deliverables), to technical assistance (where CGA provides supplemental resources that the client manages), CGA assists client companies of all sizes to define and implement information systems.

CGA has expertise in all types of conversions, as well as a range of technical capabilities and project management skills, including:

- Project management methodology
- Application design, development, and documentation
- System conversions and migrations
- Software maintenance

CGA considers its strengths to include:

- Managing complex or large projects
- Operating as part of a diversified team (partnering with the client's resources)
- Operating as a multinational team (partnering with CAP GEMINI SOGETI's worldwide resources)

CGA is organized geographically and by technical specialties. In addition to local technical strengths, National Practice Groups (listed below) provide technical and marketing support to the branches:

- Integrated Manufacturing Technology (IMT)
- Re-engineering/Conversions
- Data Center Services
- Accelerated Quality Solution (AQS)

Additionally, CGA Service Offerings include the following prepackaged services:

- Business Recovery Planning
- Computer-Aided Software Engineering (CASE)
- Conversions
- Data Center Consulting

CGA also has business partnerships with various vendors that allows CGA to perform in both prime and subcontractor roles in systems integration projects. CGA has various agreements with IBM Bull, NCR, Wang, Carleton, Index Technology, Bachman, and KnowledgeWare.

Some recent contracts completed by CGA include:

- System conversion support for Mutual of New York's (MONEY) pension management system from an HP-3000 to an IBM 3090 environment (and from HP BASIC to COBOL II). CGA developed a number of custom-designed translation tools and synchronized the efforts of management and technical personnel--from the hardware vendor, the consulting firm that

developed the system, MONY's Pension Operations; and from Computer Information Systems, MONY's MIS group.

- Coordinating the overall system implementation of French Rail, Inc.'s (FRI) automated U.S. ticket reservation/sales system. In addition to developing the application software, CGA assisted FRI with hardware recommendations and coordinated the development and installation of the data communications network.
- Migrating a leading pharmaceutical manufacturer's (Organon, Inc.'s) data processing from an outside processing service using an IBM 4381 to an in-house DEC VAX 8530.
- Customizing documentation and training for Lever Brothers' Hewlett-Packard-based Materials Management software
- Developing an automated cost-reporting system for Forest City, the second largest commercial real estate development and construction company in the U.S.
- Coordinating the move of UMC Petroleum Corporation data centers
- Assisting Imprimis Technology, the former disk drive division of Control Data, convert from CYBER to an IBM hardware platform in order use packaged software for international invoicing and currency clearinghouse applications

Industry Markets

CGA derived its 1990 revenue from the following industry sectors:

Services	25%
Communications	22%
Finance	19%
Insurance	12%
Manufacturing	11%
Government	7%
Other	<u>4%</u>
	100%

Many of the nation's Fortune 500 industrial companies are CGA clients:

- 75% of the Fortune 100 are CGA clients
- 65% of the Fortune 200 are CGA clients
- 85% of CGA business is through repeat clients
- 60% have been CGA clients for more than ten years

**Geographic
Markets**

CGA derived 100% of its 1990 revenue from the U.S.

CGA is organized into eight areas with more than 40 branch offices nationwide.

**Computer
Hardware and
Software**

CGA has Wang, IBM AS/400, and IBM personal computers (with IBM Information Network access) for internal use.

COMPANY PROFILE

CAP GEMINI AMERICA

1133 Avenue of the Americas
12th Floor
New York, NY 10036-6710
(212) 221-7270

Robert J. Sywolski, Chairman and CEO
Stephen A. Carns, President and COO
Subsidiary of CAP GEMINI SOGETI
Total Employees: 3,200
Total Revenue, Fiscal Year End
12/31/89: \$220,000,000

The Company

CAP GEMINI AMERICA (CGA) provides information management consulting, complex system design and implementation, software installation and support, and computer training and operations primarily to Fortune 1000 and midsize businesses in the banking and finance, insurance, telecommunications, manufacturing, and transportation industries. CGA represents the U.S. division of CAP GEMINI SOGETI, an international group of professional services companies.

- CAP GEMINI SOGETI was formed in 1975 by joining three independent computer consulting firms: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. for supporting the establishment of software houses in Europe and the U.S.; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
- Headquartered in Paris, CAP GEMINI SOGETI has approximately 13,000 employees worldwide and is organized into three operational groups: CAP SESA, CAP GEMINI EUROPE, and CAP GEMINI AMERICA. Combined operating revenues of the three groups reached \$1.3 billion in 1989.

CGA was formed in January 1986 through the acquisition of the consulting division of CGA Computer, Inc., and the merger of its operations with CAP GEMINI DASD.

- DASD Corporation, acquired by CAP GEMINI SOGETI in January 1981, was founded in 1974 in Milwaukee (WI) as a contract programming house.
- CGA Computer, Inc., acquired in 1986, was founded in 1968 to provide consulting services for design and implementation efforts.

CGA now operates more than 50 branch offices in 38 cities across the U.S.

CGA's 1989 revenue reached approximately \$220 million, a 33% increase over 1988 revenue of \$165 million. A five-year revenue summary follows:

**CAP GEMINI AMERICA
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1989	1988	1987	1986	1985
Revenue	\$220.0	\$165.0	\$132.0	\$93.0	\$69.0
• Percent increase from previous year	33%	25%	42%	35%	38%

Since 1978, CGA has experienced an annual growth rate of 26%.

Recent acquisitions made by CGA include the following:

- In December 1989, CGA acquired Merit Systems, Inc. of Detroit (MI) from its founders.
 - Merit Systems is a professional services firm specializing in computer-integrated manufacturing (CIM) applications.
 - Merit Systems had approximately 200 employees at the time of the acquisition and annual revenue of \$15 million. Its operations have been merged into CGA.
- In April 1989, CGA acquired Systemation, Inc. of Cleveland (OH).
 - Systemation provides professional services with expertise in manufacturing and CASE.
 - Systemation had approximately 400 employees at the time of the acquisition and annual revenue of \$25 million. Its operations have been merged into CGA.
- In January 1989, CGA acquired CompAct Data Systems of Canoga Park (CA).

- CompAct Data Systems is a leader in DOS-to-MVS system conversions and data center consulting. CompAct Data Systems provides a range of conversion services, from determining analysis requirements to implementation and training.
- CompAct Data Systems had 42 employees at the time of the acquisition and annual revenue of about \$6 million. Its operations have been merged into CGA.
- In January 1987, CGA acquired Sycomm Systems Corp., a New Jersey-based consulting and computer services firm.
 - Sycomm Systems Corp. had 300 employees at the time of the acquisition and 1986 revenue of \$18 million. Its operations have been merged into CGA.

CGA competes with professional services companies throughout the U.S.

Key Products and Services

One hundred percent of CGA's revenue is derived from professional and systems integration services. CGA services and their percent revenue contributions are as follows:

Contract programming	50%
System conversion	10%
System development	10%
Information technology consulting	10%
Systems integration	10%
Training/education	5%
Documentation	<u>5%</u>
	100%

CGA has expertise in providing platform-to-platform and DOS-to-MVS conversion services, with specialized expertise in the areas of AS/400, CIM, CASE, and DB2 implementation.

In September 1989, CGA was selected as a service provider by IBM for AD/Cycle, IBM's application development strategy for SAA. In this role, CGA will assist customers through training, installation, and consulting services in support of AD/Cycle.

Some recent contracts completed by CGA include:

- Implementation of an automated reservation system for an international travel firm. CGA assisted with hardware recommendations and coordinated development and installation of the data communications network.
- Migrating a leading pharmaceutical manufacturer's data processing from an outside processing service using an IBM 4381 to an in-house DEC VAX 8530.
- Migrating the pension management system of a national insurance company's financial services division to an IBM 3090. CGA changed the hardware as well as the application's source code from BASIC to COBOL II.

Industry Markets

CGA derived its 1989 revenue from the following industry sectors:

Services	25%
Communications	22%
Finance	19%
Insurance	12%
Manufacturing	11%
Government	7%
Other	<u>4%</u>
	100%

Geographic Markets

CGA derived 100% of its 1989 revenue from the U.S.

CGA is organized into four areas with 14 regions and more than 50 branch offices nationwide.

Computer Hardware and Software

CGA has Wang, IBM AS/400, and IBM personal computers (with IBM Information Network access) for internal use.

COMPANY PROFILE

CAP GEMINI AMERICA

1133 Avenue of the Americas
12th Floor
New York, NY 10036-6710
(212) 221-7270

Robert J. Sywolski, President
and CEO
Subsidiary of CAP Gemini Sogeti
Total Employees: 2500
Total Revenue, Fiscal Year End
12/31/88: \$165,000,000

The Company

CAP Gemini America (CGA) represents the U.S. division of CAP Gemini Sogeti, an international group of professional services companies.

- CAP Gemini Sogeti was formed in 1975 by joining three independent computer consulting firms: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. for supporting the establishment of software houses in Europe and the U.S.; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
- Headquartered in Paris, CAP Gemini Sogeti has approximately 12,000 employees worldwide and is organized into three operational groups: CAP Sogeti France, CAP Gemini Europe, and CAP Gemini America. Combined operating revenues of the three groups reached \$970 million in 1988.

CAP Gemini America was formed in January 1986 through the acquisition of the consulting division of CGA Computer, Inc., and the merger of its operations with CAP Gemini DASD.

- DASD Corporation, acquired by CAP Gemini Sogeti in January 1981, was founded in 1974 in Milwaukee (WI) as a contract programming house.
- CGA Computer, Inc., acquired in 1986, was founded in 1968 to provide consulting services for design and implementation efforts.

CGA now operates 48 branch offices in cities across the U.S.

CGA reported having \$165 million in revenue during 1988, a 25% increase over 1987 revenue of \$132 million. A five-year revenue summary follows:

**CAP GEMINI AMERICA
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1988	1987	1986	1985	1984
Revenue	\$165.0	\$132.0	\$93.0	\$69.0	\$50.0
• Percent increase from previous year	25%	42%	35%	38%	16%

Recent acquisitions made by CGA include the following:

- In January of 1989, CGA acquired CompAct Data Systems of Canoga Park (CA).
 - CompAct Data Systems is a leader in DOS to MVS system conversions. CompAct Data Systems provides a range of conversion services, from determining analysis requirements to implementation and training.
 - INPUT estimates CompAct Data Systems employed 100 people at the time of the acquisition.
- In December 1986, CGA acquired Sycomm Systems Corp., a New Jersey-based consulting and computer services firm.
 - In 1986, Sycomm Systems Corp. reported that it employed 300 people who generated \$18 million in revenue that year.

CGA reports that as of December 31, 1988 the company had 2,571 employees. CGA further states that 2,134 of its employees, or approximately 83%, are consultants.

CGA competes with professional services companies throughout the U.S.

Key Products and Services

CGA considers its specialty to be system conversion and applications development.

One hundred percent of CGA's revenue is derived from Professional and Systems integration services. CGA services and their percent revenue contributions are as follows:

Contract programming	55%
System conversion	10%
System development	10%
Information technology consulting	10%
Systems integration	5%
Training/education	5%
Documentation	<u>5%</u>
	100%

Some recent contracts completed by CGA include:

- System conversion from HP-3000 to MVS for a health insurance company located in the Southwest.
- System conversion from an IBM 3081 & 4381 to an IBM System/38 for a midwestern chemical manufacturer.
- System conversion from a DEC 10 to an IBM 3090 XA for a midwestern insurance company.
- System conversion from a Honeywell L/66 to an IBM 3090 for an insurance company located in the South.

Industry Markets

CGA derived its 1988 revenue from the following industry sectors:

Services	25%
Communications	22%
Finance	19%
Insurance	12%
Manufacturing	11%
Government	7%
Other	<u>4%</u>
	100%

Geographic Markets

CGA derived 100% of its 1988 revenue from the U.S.

CGA is organized into two areas with 11 regions and 48 branch offices.

- The North Area has the following regions serving the northern U.S.:

- Midstates Region serving Denver to St. Louis
- Midwest Region serving Chicago to Kansas City
- Northcentral Region serving the north-central U.S., with its main offices in Minneapolis and Milwaukee.
- Northeast Commercial Region serving the New York and New Jersey commercial interests.
- Northeast Communications Region serving the New York and New Jersey communications interests.
- Northeast Financial Region serving the financial interests of New York and New Jersey.
- The South Area has the following regions serving the southern U.S.:
 - Central Region serving the south-central U.S. with offices in Dayton and Cleveland (OH).
 - Mid-Atlantic Region serving the coastal states from Philadelphia to Wilmington.
 - South Region serving the southern U.S. with offices from Orlando to Atlanta.
 - Southwest Region serving the southwestern U.S. with offices in Dallas and Houston.
 - West Region serving the western U.S. with offices from Seattle to Los Angeles.

**Computer
Hardware and
Software**

CGA has IBM personal computers installed at all offices for internal use.

COMPANY PROFILE*

CAP GEMINI DASD, INC.
9045 N. Deerwood Drive
Milwaukee, WI 53223
(414) 355-3405

Office of the President:
9160 Red Branch Road
Suite 1B
Columbia, MD 21045
(301) 730-2002

James G. Kerridge, President
Subsidiary of CAP Gemini Sogeti
Total Employees: 917
Total Revenue, Fiscal Year End
12/31/84: \$50,564,000

THE COMPANY

- CAP Gemini DASD represents the U.S.A. Group of CAP Gemini Sogeti, an international group of 30 computer services companies engaged in professional services consulting, systems design and implementation, and software development and marketing.
 - CAP Gemini Sogeti was formed in 1975 by joining three independent computer consulting firms: CAP, a Paris-based software and consulting firm; Gemini, an American firm founded in 1969 as Gemini Computer Systems, Inc. for supporting the establishment of software houses in Europe and the U.S.; and Sogeti, formed in 1969 to provide consulting in the design and implementation of software applications.
 - Headquartered in Paris, CAP Gemini Sogeti has 4,700 employees worldwide and is organized into four operational groups: France Group, Europe Group, U.S.A. Group, and the Development Group. Combined operating revenues of the four groups reached \$186.7 million in 1984.
- CAP Gemini DASD was formed in January 1984 by uniting the U.S. operations of DASD Corporation, Spiridellis & Associates, Inc., and CAP Gemini, Inc. under one company.
 - DASD Corporation, acquired by CAP Gemini Sogeti in January 1981, was founded in 1974 in Milwaukee (WI) as a contract programming house.
 - Spiridellis & Associates, Inc. was acquired by DASD in May 1982. Headquartered in New York City, the company had been formed in 1975 to provide data processing consulting services.
 - CAP Gemini, Inc., headquartered in Vienna (VA), was formed in 1978 as a wholly owned subsidiary of CAP Gemini Sogeti specializing in profes-

*Replaces Company Profile on DASD Corporation dated July 1983

sional services for large U.S. government agencies. The company was merged with DASD in April 1982.

- CAP Gemini DASD now operates branch offices in 24 cities across the U.S. and has expanded its professional services to include conversions, translators, and information management consulting.
 - Associated U.S.A. Group activities include:
 - CAP Gemini Software Products, Inc., the provider of Multipro, an IBM PC/XT programmer workstation.
 - ICOMX, the provider of data communications consulting services.
 - New Technologies/Development, responsible for the development and implementation of new technologies and the development and production of educational seminars.
 - CAP Gemini Services Inc., the provider of CAP Gemini DASD services on classified contracts.
- CAP Gemini DASD's 1984 operating revenue reached \$50.6 million, a 24% increase over 1983 revenue of \$40.9 million.
- Major competitors of CAP Gemini DASD include AGS Computers, Inc., Computer Sciences Corporation, Electronic Data Systems, and Informatics General Corporation (subsidiary of Sterling Software).

KEY PRODUCTS AND SERVICES

- Approximately 98% of CAP Gemini DASD's 1984 revenue was derived from professional services and 2% from software products.
 - Of the professional services revenue, approximately 66% was derived from software development, 20% from conversion software or conversion projects, about 10% from management consulting, and the remainder from various services such as system integration, maintenance, and training.
- CAP Gemini DASD provides its services in three major areas: custom software development, conversions, and information management consulting. Over 80% of 1984 projects were done on mainframe computers, less than 20% involved minicomputers or microcomputers. About 60% of the projects were administrative-type data processing and 40% were industrial, scientific, or DP assistance contracts.
- 1984 professional services highlights include:
 - The development of a data base interface for the language ADA.

CAP GEMINI DASD, INC.

- Assisting customers in the development of Fourth Generation Language applications and Information Centers.
- Installation support activities for banking application packages.
- The development of software to support account conversions necessary to handle mergers and consolidations in the financial community.
- The expansion of UNIX and "C" capability and their application to telecommunications tasks.
- The development of laser disk management systems.

INDUSTRY MARKETS

- CAP Gemini DASD derived its 1984 revenue from the following industry sectors:

	<u>Percent of 1984 Revenue</u>	<u>Percent of Total Accounts</u>
Manufacturing	23%	33%
Communications/Utilities	23	8
Insurance	15	9
Banking and Finance	13	10
Transportation/Trade	6	9
Services	6	13
Government	6	5
Other	<u>8</u>	<u>13</u>
	100%	100%

- Major customers include AT&T Information Systems, the regional Bell operating companies, Merrill Lynch, Metropolitan Life Insurance, Blue Cross/Blue Shield organizations, large banks, and utility companies.

GEOGRAPHIC MARKETS

- Virtually all of CAP Gemini DASD's revenue is derived from the U.S.
- The corporation is headquartered in Milwaukee and New York City. Branch offices are located throughout the four regional divisions, as follows:
 - Western Region (Carson, CA).
 - Los Angeles and San Francisco, Denver, Portland (OR), and Seattle (WA).

CAP GEMINI DASD, INC.

- Midwestern Region (Milwaukee, WI).
 - Chicago, Minneapolis (MN), and St. Louis (MO).
- Southern Region (Tampa, FL).
 - Austin, Dallas, and Houston (TX); Jacksonville, Miami, and Orlando (FL), and Atlanta.
- Eastern Region (New York, NY).
 - Baltimore, Edison (NJ), Philadelphia, and Washington (DC).

COMPUTER HARDWARE AND SOFTWARE

- CAP Gemini DASD has IBM personal computers installed in all offices for internal use.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

December 1997

CAP Gemini — SAP Services

Contact Information:

Steve O'Gorman
Sales Support Manager
Package Based Consulting
01483 786 194

Cap Gemini America
Package Based Solutions
5847 San Felipe, Suite 990
Houston, TX 77057

Cap Gemini UK
Cap Gemini House
Church Street West
Working, Surrey
GU21 1HS

This profile outlines the services and support offered by Cap Gemini to its clients for SAP services in the United States and United Kingdom.

Company Background

Cap Gemini's SAP practice is part of Cap Gemini's Package Based Solutions division. Cap Gemini's mission is to sell and deliver services around the implementation, configuration, modification, interfacing, migration and reengineering around integrated Enterprise Resource Planning (ERP) Information Systems based on standard ERP packages like SAP R/3.

Cap Gemini, based in Paris, was established 25 years ago and provides Information Technology (IT) services in 17 European countries, the U.S. and the Far East. Cap

Gemini is one of the largest IT consulting companies in the world with revenues of \$3.4 billion. Cap Gemini's U.K. consulting business increased by 45%. Gemini Group, has 30,000 employees worldwide.

Cap Gemini SAP Relationship

Cap Gemini is a SAP Global Logo Partner, with over 250 SAP-certified consultants in the U.S. and reaching 1200+ consultants worldwide. Cap Gemini plays an active role in SAP product development and testing and assigns staff to SAP's headquarters in Waldorf, Germany.

Cap Gemini was one of the first major IT consulting firms to create a partnership with SAP which began in 1986. The company operates SAP Centers of Expertise in 17 countries. These centers are National Logo Partners for their individual countries and provide the basis for Cap Gemini's ability to support multinational roll-outs for any size customer organization.

Services

Cap Gemini offers a comprehensive range of services for SAP R/3 implementation:

- Comprehensive consulting to identify benefits and potential fit of SAP to business needs
- Business-driven solutions
- Business and change management consulting
- Project management
- Complete SAP training
- International roll-out
- Implementation
- Supply Chain Integration
- Pre-configured templates
- Jump Start system solutions
- Tools for Speedy implementations

Implementation Methodology

Cap Gemini America was the first IT consulting firm in the United States to achieve ISO 9001 certification. The PERFORM™ methodology encompasses three dimensions: Quality Management, Service Management, and Service Delivery. PERFORM™ enables Cap Gemini to monitor project completion, make real-time

adjustments to project management plans and ensure consistent implementations worldwide.

Cap Gemini can incorporate other methodologies into the PERFORM™ methodology per the clients' requests.

Industry Knowledge and References

Since 1986, Cap Gemini has been involved in over 500 SAP implementations worldwide. Cap Gemini has been involved in over 70% of all R/3 projects and 80% of all R/2 projects have been based in Europe, Cap Gemini has been involved in over 50 R/3 implementations in the U.S. The following are projects that Cap Gemini was involved with in 1996.

Figure 1

Cap Gemini SAP Services

INDUSTRY	MODULES
Chemicals	FI, SD, PP, MM, CO
Manufacturing	FI, CO, SD, MM
Utilities	MM, PM, FI, CO, AM, PS
Pharmaceuticals	FI, CO, AM, SD, MM, HR-TM

Source: Cap Gemini America

Industry Knowledge

Cap Gemini focuses their SAP expertise on the following industries:

- Industry
- Health
- Pharmaceuticals
- Retail
- Distribution
- Transportation
- Process
- Oil & Gas
- Chemicals
- Utilities
- Discrete Manufacturing

Strategic Positioning

Global reach is one of Cap Gemini's strong points. The company takes advantage of their many SAP- certified consultants, and proven methodology to deliver successful implementations around the world. Cap Gemini has more than 1,000 SAP consultants world-wide with 60 of them based in the UK.

Cap Gemini strengthened its marketing message in September 1996 when it re-branded all its international services operation to the Cap Gemini name and logo. Until then, the company had been trading in many countries under different names, thereby sending an image to the market of a loose federation of companies rather than one corporation.

Around 70% of all R/3 projects and 80% of all R/2 projects that Cap Gemini has led, have been based in Europe.

Cap Gemini's U.S. consultants have on average 3.6 years of SAP experience, which is higher than the industry average. The mix of experience level and global reach means that the company can deliver quality services and solutions to companies of all sizes.

Cap Gemini considers their clients as partners. In a recent survey of U.S. SAP customers, Cap Gemini received a rating of 7.68 out of 10. This was the second highest rating given in the IT industry. The score in the categories of teaming and professionalism/quality of work were the highest of all the global partners of SAP.

Cap Gemini is one of the leaders in resolving Year 2000 problems. Many companies with Year 2000 problems will opt for SAP solutions, and use vendors who can guarantee rapid implementations. By teaming with the TransMillennium™ division of Cap Gemini America, implementation of ERP solutions quickly and effectively to help clients do business in the 21st century. Cap Gemini is currently working with a number of clients in the U.S. implementing SAP R/3 and Year 2000 solutions.

Competition

Cap Gemini primarily competes for projects against the following firms: Andersen Consulting, Deloitte & Touche ICS, Ernst & Young, IBM, Price Waterhouse.

Cap Gemini's objective in the SAP market is to provide exceptional solutions for their clients, that will make them more profitable in their marketplace.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program

December 1997

CAP Gemini — SAP Services

Contact Information:

Steve O'Gorman
Sales Support Manager
Package Based Consulting
01483 786 194

This profile outlines the services and support offered by Cap Gemini to its clients for SAP services in the United States and United Kingdom.

Cap Gemini America
Package Based Solutions
5847 San Felipe, Suite 990
Houston, TX 77057

Cap Gemini UK
Cap Gemini House
Church Street West
Working, Surrey
GU21 1HS

Company Background

Cap Gemini's SAP practice is part of Cap Gemini's Package Based Solutions division. Cap Gemini's mission is to sell and deliver services around the implementation, configuration, modification, interfacing, migration and reengineering around integrated Enterprise Resource Planning (ERP) Information Systems based on standard ERP packages like SAP R/3.

Cap Gemini, based in Paris, was established 25 years ago and provides Information Technology (IT) services in 17 European countries, the U.S. and the Far East. Cap

Gemini is one of the largest IT consulting companies in the world with revenues of \$3.4 billion. Cap Gemini between 1994 and 1995 alone, Cap Gemini's U.K. consulting business increased by 45%. Gemini Group, has 30,000 employees worldwide.

Cap Gemini SAP Relationship

Cap Gemini is a SAP Global Logo Partner, with over 250 SAP-certified consultants in the U.S. and reaching 1200+ consultants worldwide. Cap Gemini plays an active role in SAP product development and testing and assigns staff to SAP's headquarters in Waldorf, Germany.

Cap Gemini was one of the first major IT consulting firms to create a partnership with SAP which began in 1986. The company operates SAP Centers of Expertise in 17 countries. These centers are National Logo Partners for their individual countries and provide the basis for Cap Gemini's ability to support multinational roll-outs for any size customer organization.

Services

Cap Gemini offers a comprehensive range of services for SAP R/3 implementation:

- Comprehensive consulting to identify benefits and potential fit of SAP to business needs
- Business-driven solutions
- Business and change management consulting
- Project management
- Complete SAP training
- International roll-out
- Implementation
- Supply Chain Integration
- Pre-configured templates
- Jump Start system solutions
- Tools for Speedy implementations

Implementation Methodology

Cap Gemini America was the first IT consulting firm in the United States to achieve ISO 9001 certification. The PERFORM™ methodology encompasses three dimensions: Quality Management, Service Management, and Service Delivery. PERFORM™ enables Cap Gemini to monitor project completion, make real-time

adjustments to project management plans and ensure consistent implementations worldwide.

Cap Gemini can incorporate other methodologies into the PERFORM™ methodology per the clients' requests.

Industry Knowledge and References

Since 1986, Cap Gemini has been involved in over 500 SAP implementations worldwide. Although around 70% of all R/3 projects and 80% of all R/2 projects have been based in Europe, Cap Gemini has been involved in over 50 R/3 implementations in the U.S. The following are projects that Cap Gemini was involved with in 1996.

Figure 1

Cap Gemini SAP Services

INDUSTRY	MODULES
Chemicals	FI, SD, PP, MM, CO
Manufacturing	FI, CO, SD, MM
Utilities	MM, PM, FI, CO, AM, PS
Pharmaceuticals	FI, CO, AM, SD, MM, HR-TM

Source: Cap Gemini America

Industry Knowledge

Cap Gemini focuses their SAP expertise on the following industries:

- Industry
- Health
- Pharmaceuticals
- Retail
- Distribution
- Transportation
- Process
- Oil & Gas
- Chemicals
- Utilities
- Discrete Manufacturing

Strategic Positioning

Global reach is one of Cap Gemini's strong points. The company takes advantage of their many SAP- certified consultants, and proven methodology to deliver successful implementations around the world. Cap Gemini has more than 1,000 SAP consultants world-wide with 60 of them based in the UK.

Cap Gemini strengthened its marketing message in September 1996 when it re-branded all its international services operation to the Cap Gemini name and logo. Until then, the company had been trading in many countries under different names, thereby sending an image to the market of a loose federation of companies rather than one corporation.

Around 70% of all R/3 projects and 80% of all R/2 projects that Cap Gemini has led, have been based in Europe.

Cap Gemini's U.S. consultants have on average 3.6 years of SAP experience, which is higher than the industry average. The mix of experience level and global reach means that the company can deliver quality services and solutions to companies of all sizes.

Cap Gemini considers their clients as partners. In a recent survey of U.S. SAP customers, Cap Gemini received a rating of 7.68 out of 10. This was the second highest rating given in the IT industry. The score in the categories of teaming and professionalism/quality of work were the highest of all the global partners of SAP.

Cap Gemini is one of the leaders in resolving Year 2000 problems. Many companies with Year 2000 problems will opt for SAP solutions, and use vendors who can guarantee rapid implementations. By teaming with the TransMillenium™ division of Cap Gemini America, implementation of ERP solutions quickly and effectively to help clients do business in the 21st century. Cap Gemini is currently working with a number of clients in the U.S. implementing SAP R/3 and Year 2000 solutions.

Competition

Cap Gemini primarily competes for projects against the following firms: Andersen Consulting, Deloitte & Touche ICS, Ernst & Young, IBM, Price Waterhouse.

Cap Gemini's objective in the SAP market is to provide exceptional solutions for their clients, that will make them more profitable in their marketplace.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

June 1997

Cap Gemini S.A.

Place de l'Etoile
11 rue de Tilsitt
75017 Paris

France

Phone: +33 (1) 47 54 50 00

Fax: +33 (1) 42 77 32 11

Internet: www.capgemini.com

1114 Avenue of the Americas
29th Floor

New York, NY 10036

U.S.A.

Phone: (212) 944-6464

Fax: (212) 719-5346

Chairman:	Serge Kampf
Status:	Public
Employees:	25,950 (12/96)
Revenue:	FF14,800,000,000
Fiscal Year End:	12/31/96

- In January 1997, Cap Gemini integrated the Bossard Group into its operations.

Company Description

Cap Gemini was founded in 1975 under the name Cap Gemini Sogeti through the merger of the Sogeti Group, Gemini Computer Systems, and CAP.

Sogeti had been established in France in 1967 by Serge Kampf, who is now chairman and CEO of the group and one of its largest shareholders.

Cap Gemini has, through organic growth and aggressive acquisition, reached a position as one of the leading software and services vendors in Europe. Some of these acquisitions have been crucial for establishing footholds in Europe:

Key Points

- Cap Gemini S.A. is a leading French software and services company with wide-spread European geographic coverage and increased activities in the U.S. and Asia.
- The company reported a strong increase in net income from 1995 to 1996.
- In September 1996, Cap Gemini implemented a worldwide logo and naming convention to provide a unified company profile.

- The 1993 acquisition of Hoskyns established Cap Gemini firmly in the U.K.
- The 1992 acquisitions of Programator and Volmac provided strongholds in the Nordic countries and Benelux, respectively.
- An alliance with Daimler Benz, dating back to 1991, that gave debis (Daimler Benz's internal IT division) a share in Cap Gemini while establishing the joint venture IT services company Debis Systemhaus

These and other acquisitions meant that the structure of Cap Gemini became quite fragmented and traded under a variety of company names. In September 1996, the company reorganized its group capital structure to create the Cap Gemini Group. At the same time, all operating companies across the world rebranded in order to trade under the Cap Gemini name and logo.

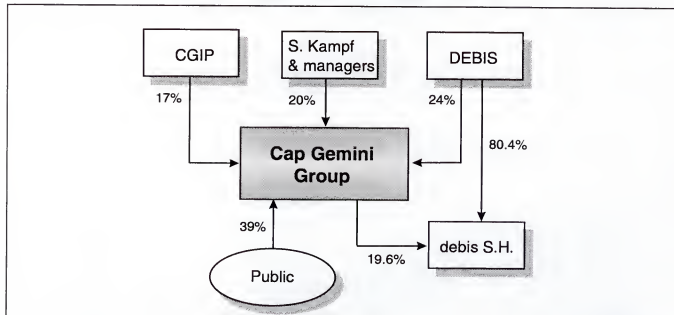
Exhibit 1 shows the ownership structure of the Cap Gemini Group.

Debis' investment in Cap Gemini has a higher limit dictated by the U.S. "Bank Holding Company Act." Daimler Benz, debis' parent company, is 24.4% owned by the Deutsche Bank. As Cap Gemini has major activities in the U.S., the "Bank Holding Company Act" becomes relevant, not allowing any bank-owned company to have investments in a services company higher than 25%.

However, debis has announced its intention to sell its stake in Cap Gemini, reflecting the diverting strategies of the two companies. The shares will be sold to institutions outside the U.S. At the same time, debis will buy back Cap Gemini's stake in debis Systemhaus.

Exhibit 1

Cap Gemini Group Ownership, June 1997



Source: INPUT

Operations and Structure

Cap Gemini is organized around geographical Strategic Business Areas (SBA) and vertical markets. Exhibit 2 shows the organization of the Cap Gemini Group.

The global market units have been formed to address the increasing globalization of the company's customers and their business issues.

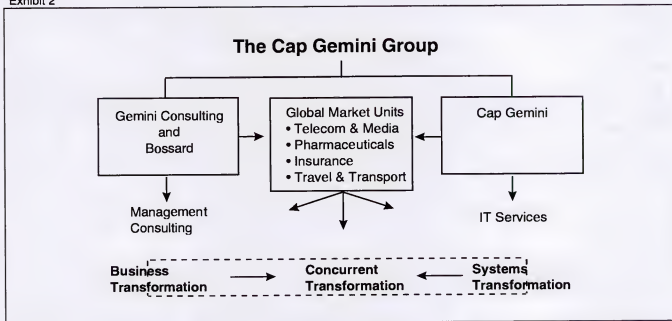
Cap Gemini was already active in the telecommunications and media market in Europe. However, the company believes that through the formation of global market units it can better focus efforts and skills from both its IT services and its management consulting

arms. This unit has a team of 1,000 employees.

Apart from the global market units, Cap Gemini also focuses on the following vertical markets:

- Process Industries
- Banking and Finance
- Utilities
- Consumer Products, Retail, & Distribution
- Government & Public Services
- Manufacturing

Exhibit 2



Source: Cap Gemini

Exhibit 3

**Cap Gemini S.A.
Five-Year Financial Summary
(FF Millions)**

Year	1992	1993	1994	1995	1996
Revenue	11,884	11,028	10,176	11,329	14,810
Percent Change from Previous Year	19%	-7%	-8%	11%	31%
Net Income	-72	-429	-94	52	280
Net Income as % of Revenue	N/A	N/A	N/A	0.5%	1.9%
Average Number of Employees	21,675	20,900	19,001	20,477	23,934
Revenue per Employee	0.548	0.528	0.536	0.553	0.619

Source: Cap Gemini/ INPUT

Financial Information

In 1995, Cap Gemini returned to profitability after a spell of losses in the early 1990s that was mainly caused by integration of its acquisitions.

The company's 1996 financial results showed further improvement. Revenue increased by 31% to FF 14.8 billion (\$2.9 billion), while net income improved by more than 400%. Exhibit 3 provides a summary of Cap Gemini's financial results for the past five years.

The revenue for 1996 includes a consolidation of Gemini Consulting into the group for a period of seven months. Without this integration, the revenue increase from 1995 to 1996 would have been 18%.

Market Analysis

Cap Gemini's major activities are software production, professional services, and outsourcing. Exhibit 4 shows INPUT's estimate of the split of the company's worldwide revenue in 1996 by product/service mode.

Exhibit 4

**Cap Gemini S.A.
Worldwide Revenue by
Product/Service Mode
(\$ Millions)**

Product/Service Mode	Revenue (\$ Millions)	Percent of Total
System Software Products	60	2%
Application Software Products	125	4%
Professional Services	1,280	45%
Systems Integration	570	20%
Systems Operations	615	22%
Other	200	7%
Total Software & Services	\$2,850	100%

Source: INPUT estimates
Percentages rounded

Cap Gemini generates close to 90% of its revenues in Europe. Exhibit 5 shows the company's European revenue by product/service mode, as estimated by INPUT.

Exhibit 5

**Cap Gemini S.A.
European Revenue by
Product/Service Mode, (\$ Millions)**

Product/Service Mode	Revenue (\$ Millions)	Percent of Total
System Software Products	60	2%
Application Software Products	100	4%
Professional Services	1,190	48%
Systems Integration	500	20%
Systems Operations	550	22%
Other	80	3%
Total European Software & Services	\$2,480	100%

*Source: INPUT estimates
Percentages are rounded*

Exhibit 6 shows INPUT's estimates of Cap Gemini's revenue by industry sector.

Exhibit 6

**Cap Gemini S.A.
Revenue by Industry Sector
(\$ Millions)**

Industry Sector	Revenue (\$ Millions)	Percent of Total
Manufacturing	485	17%
Process Industries	255	9%
Transport, Travel & Tourism	170	6%
Retail & Distribution	315	11%
Telecommunications & Media	370	13%
Utilities	145	5%
Banking & Finance	655	23%
Public Sector	455	16%
Total Software & Services	\$2,850	100%

*Source: INPUT estimates
Percentages rounded*

Exhibit 7 provides INPUT's estimate of Cap Gemini's European revenue by industry sector.

Exhibit 7

**Cap Gemini S.A.
European Revenue by Industry Sector
(\$ Millions)**

Industry Sector	Revenue (\$ Millions)	Percent of Total
Manufacturing	670	27%
Banking & Finance	545	22%
Public Sector	420	17%
Retail & Distribution	250	10%
Telecommunications & Media	295	12%
Other	300	12%
Total European Software & Services	\$2,480	100%

*Source: INPUT estimates
Percentages are rounded*

Geographic Markets

Cap Gemini's operations are divided into strategic business areas (SBAs). These are:

- SBA 1—U.S.: Process industries (oil, gas, and chemicals)
- SBA 2—U.K. and Ireland: Finance
- SBA 3—Nordic Countries: Utilities
- SBA 4—Benelux: Consumer Products, Retail, and Distribution
- SBA 67—France and Southern Europe: Manufacturing (automobile)
- SBA 8—Asia

In November 1996, Cap Gemini opened an office in Singapore, Cap Gemini Asia. The company plans to generate 10% of its revenue from Asia by 2002.

Exhibit 8 shows INPUT's estimate of the origin of Cap Gemini's revenue by country. Cap Gemini's activities in Germany via its investment in debis Systemhaus are not considered.

Exhibit 8

**Cap Gemini S.A.
Revenue by Country
(\$ Millions)**

Country	Revenue (\$ Millions)	Percent of Total
France	740	26%
U.K.	570	20%
Netherlands	475	17%
U.S.	315	11%
Sweden	170	6%
Belgium/Luxembourg	140	5%
Denmark	115	4%
Norway	85	3%
Italy	60	2%
Spain/Portugal	30	1%
Switzerland	30	1%
Austria	25	1%
Finland	25	1%
Other	55	2%
Total Software & Services	\$2,850	100%

*Source: Cap Gemini/ INPUT estimates
Percentages rounded*

Key Products and Services

Historically, Cap Gemini has concentrated on marketing professional services, typically custom system and software development. The company does not consider its business to be in products, either hardware or software, even though in the past software products have been acquired as part of acquisitions of professional services groups.

Today, Cap Gemini's focus has moved away from professional services toward systems integration and systems operation.

Cap Gemini's range of services is categorized into:

- *Service Offerings* which include:
 - Year 2000: The company has around 190 engineers working with 2 billion plus lines of code scanned or in process
 - Euro: Approaches and tools developed to support transforming businesses to take advantage of the single European currency unit. The group has started by aggressively targeting the finance sector and is now delivering solutions to the pharmaceuticals, retail, and other industries.
 - Internet and Electronic Commerce: Approaches to help companies reposition for developments in these key technologies.
- *Information Systems Management* is Cap Gemini's outsourcing business. The company will manage all or part of a client's information resources (including hardware, networks, applications, and people) under the provision of a long-term, contractual service level agreement. Available services includes applications management, facilities management, and the management of distributed computing environments.
- *Consulting*, which involves assisting clients in the areas of strategic business planning, operational streamlining, and the use and practical applications of advanced IT solutions. Gemini Consulting provides specialized business transformation consultancy services.
- *Project Services* covers the design, development, and delivery of information systems. The services encompass software

development, systems integration, and software product integration.

Cap Gemini also offers education and training aimed at supporting IT and non-IT professionals and end users in the use of new information technology. The company also supplies, implements, integrates, and provides support for packaged software solutions.

Cap Gemini has further developed specific sector offerings relating to its targeted global markets. For the insurance market, the company's services relate to three core offerings:

- ICIS (Insurance Company Information System), which is a customer, product, and administration management system
- DCM (Distributed and Customer Management)-a portfolio of offerings aimed at enabling insurance companies to manage multiple distribution channels and maintain long-term customer relationships
- Business Consultancy-a full range of business consulting services from strategy development to implementation, design and management

In the telecoms and media market, Cap Gemini's offerings relate to:

- Customer care and billing for basic telephone services, cellular, cable TV, etc. cetera
- Operations support, such as transmission facilities and computing infrastructure
- Telecom services, including intelligent network infrastructure and voice value-added services

- Corporate management, which encompasses the supporting accounting, provisioning, and human resources areas

Recent Projects and Major Clients

Recent major projects include:

- In May 1997, Cap Gemini in the U.K. won a four-year contract with British Steel to provide management and support of distributed systems and 500 desktop personal computers. The contract is valued at £3 million.
- In April 1997, Cap Gemini America announced that it had won a ten-year, \$75 million outsourcing contract with the United States Chamber of Commerce. Under the terms of the agreement, Cap Gemini will provide help desk services, infrastructure management services, mainframe applications support, applications management, facilities management, wide-area network services, and business process outsourcing services.
- In February 1997, Cap Gemini in the U.K. announced that it had been contracted by the Coal Authority to build the U.K.'s largest geographical information system. The contract is for eight years and is worth £11 million.
- Cap Gemini's Dutch company is working with the Dutch Public Works Authorities (Rijkswaterstaat) to improve road safety. The project entails expanding and modernizing the complete chain of IT systems for highway observation. Cap Gemini has also been made responsible for constructing part of the highway observation system's operating system.

Exhibit 9 shows a selection of Cap Gemini's major clients.

Exhibit 9

A Selection of Cap Gemini S.A.'s Major Clients

Industry Sector	Client
Process Manufacturing	Zeneca Agrochemicals Glaxo Atochem Pepsi Cola Ralcorp ASTRA Imperial Tobacco Statoil Exxon Chemicals
Discrete Manufacturing	Fokker Aircraft Renault V.I. Volvo Ford
Public Sector	Dutch Ministry of Foreign Affairs French National Library British Ministry of Defence
Transport, Travel & Tourism	British Airways Avionic Engineering Bolloré Technologies Group
Utilities	EDP GDF (French national electricity and gas utilities) British Gas OKG AB
Telecommunications & Media	Bell South France Telecom Deutsche Bundesposttelekom
Banking & Finance	ABN Amro Nordbanken Bankpyme Berliner Volksbank EG

*Source: Cap Gemini***Acquisitions and Alliances**

During the past decade, Cap Gemini has made many acquisitions. However, 1996 became the year when the company focused on reorganizing and consolidating its activities. Cap Gemini's only acquisition of the year was the increase of the company's shareholding in the Bossard Group from 49% to full ownership. The deal came into effect on 1 January 1997. Bossard's

activities in management consulting have been fully integrated into the Cap Gemini Group.

In October 1996, the company's Dutch subsidiary also announced that it had increased its share in two multimedia companies, BIT and Interactive Concepts & Production (IC) to 100%. The two companies will retain their own names and identities.

Part of Cap Gemini's mission is to partner with business technology leaders worldwide. The company's Strategic Alliance Partners include:

- Baan
- Compaq
- Digital Equipment Corporation
- Hewlett-Packard
- I2
- IBM
- IMI
- Manugistics
- Microsoft
- Oracle
- PeopleSoft
- SAP
- Sun Microsystems
- Tandem

INPUT Assessment

Initially, Cap Gemini gained its strong position in the European professional services market through a range of acquisitions. The strategy was to leave the companies to act as local companies, retaining their own names and logos. This has no doubt been comforting for existing clients, though it left Cap Gemini as a whole looking very fragmented in the market.

In 1996, Cap Gemini finally brought all companies under one name and one logo. This move was long overdue. The earlier fragmentation has not only affected the company's image in the marketplace, but must surely also have weakened the corporate spirit.

One of Cap Gemini's weaknesses has always been its lack of business consulting resources compared with competitors like Andersen Consulting and now also EDS. As part of the organizational change in the past year, Cap Gemini has integrated Gemini Consulting into the organization. The areas in which this change will be most obvious are the new global market units. The addition of the Bossard Group in January 1997 will further strengthen Cap Gemini's business consulting capabilities.

The formation of global market units also addresses another area that Cap Gemini has needed to strengthen. The company has a very strong technical background, but has needed to demonstrate detailed knowledge of business issues pertaining to its key vertical markets. By combining the expertise of Gemini Consulting with the IT services arm of the Group in the global units, Cap Gemini has taken a major step in achieving this.

The next two years should be very interesting for Cap Gemini. The company has now implemented a number of strategic changes that should ultimately affect the financial results positively. Although the company increased its profitability strongly from 1995 to 1996, Cap Gemini still has some way to go before its profit margin is at the level of some of its major competitors.



COMPANY PROFILE

CCH COMPUTAX, INC.
21250 Hawthorne Boulevard
Torrance, CA 90503-5502
(310) 543-6200

Thomas G. Rolfe, President
Wholly Owned Subsidiary of
Commerce Clearing House, Inc.
Total Employees: 1,500
Total Revenue, Fiscal Year End
12/31/91: \$197,580,000

The Company

CCH Computax, Inc. provides income tax return processing services to professional tax preparers (accountants and lawyers). Tax return processing is offered for federal returns and also for all states that impose individual and corporate income taxes. The company also provides applications software and educational services to accountants.

CCH Computax's parent, Commerce Clearing House, Inc. (CCH) is a \$700 million Delaware corporation headquartered in Riverwoods (IL). In addition to tax processing services, CCH publishes tax and business law materials and provides legal support services.

- Due to continuing economic pressures on law and accounting firms and increased competition, CCH's revenue growth and operating earnings for all of its business segments have been impacted. In response to these conditions, during 1991 CCH management implemented a general cost containment and awareness program for all of the business segments and is developing a new strategic plan (expected to be complete during mid-1992).
- Included was a 5% across-the-board downsizing, early retirement offers, and, at CCH Computax, a 250-person reduction in full-time staff and a reorganization aimed at positioning its operations to capitalize on the industry trend to migrate to in-office products.

CCH Computax's 1991 revenue was \$197.6 million, a 12% decrease from 1990 revenue of \$224.3 million. Operating profit rose 127% to \$10.2 million. A five-year financial summary follows:

**CCH COMPUTAX, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1991	1990	1989	1988	1987
Revenue	\$197.6	\$224.3	\$215.8	\$177.6	\$158.1
• Percent increase (decrease) from previous year	(12%)	4%	22%	12%	7%
Operating profit	\$10.2	\$4.5	\$3.7	\$14.5	\$19.6
• Percent increase (decrease) from previous year	127%	22%	(74%)	(26%)	20%

Revenue declines during 1991 were attributed to significant volume decreases for service bureau tax return processing, reflecting customer shifts toward in-office tax return processing systems.

- Sales of the ProSystem FX tax processing software product line (first promoted in late 1990) partially offset service bureau revenue losses in 1991 and moderately contributed to the 1990 revenue increases.
- Operating earnings improved in 1991, due principally to the effects of cost containment.
- The company anticipates increasing revenue fall-off in 1992 due to the trends discussed.

A summary of acquisitions made by CCH Computax follows:

- In 1991, CCH Computax acquired Optima Technologies, Inc., a small software development company that has assisted CCH Computax in the development of its PC-based tax return processing software.
- During 1989, CCH Computax acquired from Interactive Financial Services, Inc. of Atlanta (GA) certain software, customer lists, and other assets.
- In January 1989, the company acquired TLS Co. of Cedar Rapids (IA). TLS provides tax processing services in Iowa and now operates as a subsidiary of CCH Computax.
- In September 1988, CCH Computax acquired Accutax Systems Inc. of Walnut Creek (CA) from Reynolds and Reynolds

Company. Accutax, a provider of tax processing and education services to tax return preparers, now operates as a subsidiary of CCH Computax.

- In January 1988, the company acquired Taxx, Inc. of Metairie (LA). Taxx, a regional processor of income tax returns, now operates as a subsidiary of CCH Computax.

Key Products and Services

INPUT estimates 89% of CCH Computax's 1991 revenue was derived from its various tax processing services, 10% from software product licenses, and 1% from education services provided to accountants.

CCH Computax provides batch, remote batch, and distributed tax processing services for individual, partnership, corporation, fiduciary, oil and gas, and deferred compensation returns.

- Various methods are used for delivery of completed batch returns, including couriers and the U.S. Postal Service.
- Remote batch and interactive processing is available through CCH Computax's Command System microcomputer software. Returns can be printed at a CCH Computax processing center or at the client's location.

Applications software products provided by CCH Computax include the following:

- The Command System is an integrated set of IBM and compatible microcomputer-based software products that allow tax preparers to perform tax calculations, transmit data for calculation, rerun returns, check the processing status of returns, review billing data, and laser print returns in their offices. Over 3,100 clients use Command.
- Computax Connection products permit the tax preparer to interface microcomputer-based applications for tax planning, audits, and general ledger with taxpayer data residing on CCH Computax mainframes.
- ProSystem FX is a complete tax processing system designed to provide customer-selected delivery methods through in-office, remote job entry, or batch processing.
- 1040 Solutions, acquired by CCH Computax in 1985, is a microcomputer software product that allows preparers to

calculate and print individual tax returns in their own offices. There are currently over 4,200 installations of the product.

- CCH Computax's Fiduciary TaxsystemS Division provides fiduciary tax processing for banks using a software bridge to the bank's trust accounting system.

CCH Computax also provides the following support and education services:

- Videotapes are available from CCH Computax for federal tax updates, new-user training, and federal supplemental programs.
- Accountant's Education Services provide a series of continuing professional education programs that meet accounting and tax professionals' CPE requirements. The courses are available throughout the U.S.

Industry Markets

One hundred percent of CCH Computax's revenue is derived from professional tax preparers, including accountants and lawyers.

Geographic Markets

One hundred percent of CCH Computax's revenue is derived from the U.S.

Sales offices are located in the metropolitan areas of Atlanta, Baltimore, Boston, Chicago, Cincinnati, Connecticut, Dallas, Denver, Detroit, Houston, Kansas City, Long Island, Los Angeles, Minneapolis, New Orleans, New York City, Norfolk, Norwalk, Philadelphia, St. Louis, San Diego, San Francisco, San Jose, Seattle, Syracuse, and Tampa.

CCH Computax currently has 31 processing centers in U.S.

- Regional centers are located in Cedar Grove (NJ); Garden City (NY); Chantilly (VA); Niles (IL); Wilmington (MA); and Burlingame and Redondo Beach (CA).
- Other centers are located in Phoenix (AZ); Anaheim (CA); Denver (CO); Bridgeport (CT); Pompano Beach (FL); Norcross (GA); Louisville (KY); Livonia (MI); Edina (MN); St. Louis (MO); Middleburg Heights and Cincinnati (OH); Philadelphia and Pittsburgh (PA); Houston and Irving (TX); and Kent (WA).

**Computer
Hardware**

CCH Computax's central data center, located in Torrance (CA), has an IBM 3090-400E and a 3090-600S operating under MVS/XA.

Regional processing centers are equipped with IBM 4341 computers operating under VS/1. Other processing centers are equipped with IBM 4331 computers that operate under DOS/VSE.

Clients access CCH Computax's network via leased lines, TYMNET, or a local phone call.



COMPANY HIGHLIGHT

CAPEX CORPORATION
4125 North 14th Street
Phoenix, AZ 85014
(602) 264-7241

A. LeRoy Ellison, President
Private Corporation
Total Employees: 225
Total Revenues, Fiscal Year End
12/31/80: \$12,000,000

PRINCIPAL BUSINESS Markets systems software and applications software for financial planning. Capex began marketing systems products in 1969.

FINANCIALS

	1980	1979	1978 (\$ Thousands)	1977	1976
- Revenues	\$12,000	\$8,100	\$5,000	\$3,500	\$2,500
-	Capex management claims the company has had an average annual growth rate of 50% since 1974 and has been profitable since 1971.				

SOURCES OF REVENUE

- 95% Software products.
 - 80% Systems software.
 - 15% Applications software.
- 5% Turnkey systems.

PRODUCTS AND SERVICES

- Software products (see exhibit).
 - OPTIMIZER III, introduced in 1970, has generated in excess of \$12 million. In 1980 it contributed approximately \$4.8 million to total revenues.
- Turnkey system (see exhibit).

NEW PRODUCTS

- Capex intends to expand both by development and acquisition of software products.
 - In January 1981 Capex acquired The Scheduler, a software product that automates production workload, from Chronetics Inc. of Anaheim, CA.
 - DASD Manager is currently planned to cost about \$10,000 and will operate on IBM 360+ equipment. It has been developed internally by Capex and will be released in the fourth quarter of 1981.
 - CICS Monitor is also a new internally developed product planned for release in the fourth quarter of 1981. It will run on IBM 360+ equipment.

EXHIBIT
PRODUCTS
CAPEX CORPORATION

PRODUCT	DESCRIPTION	PRICE	NUMBER INSTALLED	CPU REQUIREMENTS (OPERATING SYSTEM)
SOFTWARE PRODUCTS				
— PROGRAMMING AND SYSTEM PRODUCTIVITY				
. OPTIMIZER	Productivity and optimization product for COBOL programmers.	\$9,750-\$28,500	1,200	IBM 360+ (OS, VS, DOS/VS)
— SYSTEM AND MANAGEMENT PERFORMANCE				
. MANAGE: IMS	Management information system which fur- nishes data necessary to monitor and control service, performance and resource utilization of IMS/VS operating systems.	\$10,900	110	IBM 360+ (IMS/VS)
. PLAN IV	Information system that assists DP manage- ment in controlling and managing system resources.	\$8,450	160	IBM 360+ (OS, VS and MVS)
. 4MVS	System information for system managers in the MVS environment.	\$6,000	PL4: MVS-200	IBM 360+ (MVS)
. 4TUNE	System measurement of MVS.	\$9,650	12	IBM 360+ (MVS)
— OPERATIONS MANAGEMENT				
. TLMS II	Tape library management system.	\$15,100	350	IBM 360+ (OS, OS/ VS in batch and interactive)
. JOBDOC	Designed to automate the process of produc- tion job documentation, set-up and submission.	\$15,000 (w/opt \$17,000)	50	IBM 360+ (OS, VSI, SVS, MVS)
. THE SCHEDULER	Automates production workload.	\$8,000-\$32,000	30	IBM 360+
— FINANCIAL PLANNING AND MODELING				
. AUTOTAB II	Financial planning capabilities for use in modeling, forecasting and budgeting.	\$26,000	150 (plus over 500 Time Sharing Users)	IBM 360+
(Also available from McAUTO as AUTOPLAN and NCSS as INFO TAB).				
. FRS	Financial modeling for banks.	\$27,000		IBM 360+
TURNKEY SYSTEM				
. AUTOTAB 300	Financial planning and modeling	\$70,000-\$110,000 depending on size of hardware con- figuration.	20	Hewlett-Packard 300

COMPANY HIGHLIGHT/CAPEX CORPORATION

INDUSTRY MARKETS Capex's revenues are distributed proportionately across industry segments without any particular concentration in any one industry.

GEOGRAPHIC MARKETS

- United States 84%.
 - . Offices in Phoenix; Atlanta; Dedham, MA; Hinsdale, IL; Dallas; Houston; Downey, CA; Clifton, NJ; King of Prussia, PA; Columbia, MD.
- International 16%.
 - . Capex currently markets only its systems products in the Netherlands, England, West Germany, France.

COMPUTER HARDWARE AND SOFTWARE Capex has two Magnuson CPUs installed at its headquarters in Phoenix.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

August 1997

The Capita Group Plc

61 - 71 Victoria Street

London

SW1H 0XA

United Kingdom

Phone: +44 (0) 171 799 1525

Fax: +44 (0) 171 799 1526

Chairman:	Rod Aldridge
Status:	Public
Number of Employees:	2,350 (03/96)
Revenue:	£111,869,000
	\$65,331,000
Fiscal Year End:	12/31/96

Key Points

- The Capita Group Plc (Capita) is a U.K.-based provider of information technology, administration, and property management services.
- In January 1997, the Capita Business Services operating unit was formed when the company's Outsourcing and Advisory divisions were merged into a single unit to provide integrated outsourcing solutions.
- Outsourcing accounts for four-fifths of the company's revenue, the remainder of

which is derived from training, consultancy, and software sales.

- New services include a third-party 'shadow' outsourcing service to other outsourcers through a joint venture with OAO.

Company Description

Capita was established in 1984 as a result of a management buyout from the Chartered Institute of Public Finance and Accountancy (CIPFA), a U.K. public sector body.

Capita rapidly established itself as a leading vendor in IT-function outsourcing in the U.K.

Originally, the company was regarded primarily as a local government specialist;

Capita still has many of its customers in this segment. The company has since expanded its vertical market focus and range of service offerings.

Operations and Structure

The Capita Group consists of the following operating units:

- Capita Business Services, employing more than 3,600, was recently formed from the Outsourcing and Advisory divisions. This unit serves the education, government, health, commercial, and international markets.
- Capita Property Services, with a staff of more than 700, is comprised of four subsidiaries: Beard Dove, EDM, Greatorex, and the Estatecare Group.

Employees

During 1996, the average number of employees at Capita was 2,350, compared to an average of 1,576 in 1995 and 1,390 in 1994.

Company Strategy

Capita Group has three strategic directions for its IT-related services:

- To expand activities in services other than IT outsourcing
- To develop and differentiate its position in the provision of managed services
- To extend its business operations services from the public sector to the commercial markets

Acquisitions

Recent acquisitions made by Capita include the following:

- In February 1997, Capita acquired Hartshead Solway Ltd., one of the U.K.'s largest pension administrators, for £4.35 million.
 - Capita now claims to be the largest administrator of pensions in the U.K.
 - According to the terms of the agreement, Capita will repay a £400,000 loan sought by Hartshead Solway.
- In February 1997, Capita also acquired DriveSafe Services Ltd. through the purchase of the remaining 50% of shares held by JHP Group Plc.
 - DriveSafe has experience in call-center technology and data scanning, as well as in providing driving theory tests.
 - Capita acquired DriveSafe for £7.5 million and 394,633 ordinary shares.
 - In addition, Capita may pay up to £5 million more, depending on the performance of DriveSafe.
- In October 1996, Capita acquired Recruitment and Assessment Services (RAS) from the U.K. government. RAS is responsible for recruiting personnel into the Civil Service.
- In July 1996, Capita acquired 60% of the issued share capital of Estatecare Group Ltd., for a nominal £1,000.
 - Estatecare Group Ltd. is a provider of architectural, project management, and engineering services to the government sector.

- Capita subsequently purchased the Estatecare business for £346,000.

Financials

Total 1996 revenue reached approximately £111.9 million (\$65.3 million), a 29% increase over 1995 revenue of approximately £87.0 million (\$56.0 million). Net income rose 24%, from £6.5 million (\$4.2 million) in 1995 to £8.0 million (\$4.7 million) in 1996.

Exhibit 1 shows a five-year summary of the Capita Group's financial results.

Exhibit 1

The group has continued to grow its revenue strongly over the past five years, despite a lower growth rate in 1995.

Capita has also managed to maintain a very high level of profitability over the period, despite the strong growth and its dependency on the more price-sensitive outsourcing market. Strong growth is expected to continue through 1997 since no existing contracts are due to expire until 1998 and new contracts have been secured this year.

Capita Group Plc
Five-Year Financial Summary
 (£ Millions, except per-share and -employee data)

Item	Fiscal Year				
	1996	1995	1994	1993	1992
Revenue (Pounds Sterling)	£111.9	£87.0	£73.8	£50.2	£33.1
Revenue (\$ Millions)	\$65.3	\$56.0	\$47.2	\$31.8	\$17.6
Percent change from previous year	29%	18%	47%	52%	34%
Income before taxes (Pounds Sterling)	£12.3	£9.4	£7.9	£5.5	£4.4
Income before taxes (\$ Millions)	\$7.2	\$6.1	\$5.1	\$3.5	\$2.3
• Percent change from previous year	31%	19%	45%	24%	28%
Net income (Pounds Sterling)	£8.0	£6.5	£5.4	£3.8	£2.9
Net income (\$ Millions)	\$4.7	\$4.2	\$3.5	\$2.4	\$1.6
• Percent change from previous year	24%	20%	43%	29%	44%
Revenue per employee (£ Thousands)	£47.6	£55.5	£53.1	£54.9	£63.3
Earnings per share (pence)	14.3	11.8	10.5	7.9	6.4
Earnings per share (\$)	\$0.08	\$0.08	\$0.07	\$0.05	\$0.03
• Percent change from previous year	12%	12%	33%	23%	19%

Source: Capita Group Plc

Dollar to pounds Sterling exchange rates are 0.584, 0.644, 0.639, 0.634, and 0.532 for 1996, '95, '94, '93, and '92, respectively.

Exhibit 2 shows a financial analysis summary. Return on capital employed continues to grow higher, proving Capita's operational ability; operating profit also continues to grow albeit within the medium 10% range necessary to establish strong market position.

The current ratio and trade debtors collection period indicate that Capita is completely solvent and likely to remain so.

Gearing, interest cover and funds ratio highlight Capita's risk-averse attitude toward debt and its lack of dependence on external sources of finance. Financial risk is therefore minimized, stabilizing annual profit flow for investment via retentions.

Exhibit 2

The Capita Group Plc Five-Year Financial Analysis Summary

Ratio	Fiscal Year				
	1996	1995	1994	1993	1992
Return on Capital Employed (%)	101.5	90.8	84.2	78.2	48.3
Operating Profit Margin (%)	10.7	10.5	10.4	10	11.2
Trade Debtors (days)	90	91	99	78	94
Current Ratio	1.1	1.1	1.1	1.1	1.4
Gearing (%)	0	0.8	1.6	0	0
Interest Cover	1197	314	142	417	619
Funds Ratio	0.8	0.7	0.7	0.6	0.3

Source: The Capita Group Plc

Revenue Analysis by Product/Service

Exhibit 3 provides a two-year breakdown of Capita's revenue by product/service, as reported by the company. As can be seen, greatest profit growth was achieved in the outsourcing and software division.

- Outsourcing accounts for four-fifths of revenue, the remainder being derived from training, consultancy, and software sales.
- Between 1995 and 1996, turnover in outsourcing and software increased by 37% to £78.5 million and profits grew by 43% to £5.97 million.

Exhibit 3

The Capita Group Plc
Two-Year Source of Revenue Summary
 (£ Millions)

Service	Revenue 1996	Revenue 1995	Revenue Growth	Profit Growth
Outsourcing and software	£78.5	£57.3	37%	43%
Property services	22.6	20.4	11%	12%
Consulting, recruitment, and training	10.8	9.3	16%	0.1%
Total	£111.9	£87.0	29%	25%

Source: The Capita Group Plc

Market Financials

INPUT estimates that 75% of Capita's 1996 revenue was derived from the government sector, 15% from utilities, 5% from business services, and 5% from the transportation industry.

Geographic Markets

More than 95% of Capita's 1996 revenue was derived from the U.K. However, the company has operations in Prague and Kuala Lumpur.

Key Products and Services

Capita Business Services

Recently formed from the Outsourcing and Advisory divisions, this unit accumulates the skills and experience of the former divisions to provide more integrated business solutions. More than 3,600 employees operate in the Business Services division.

Capita Business Services functions in five market sectors:

Education: SIMS is Capita's long-running and successful education management and administration software. Capita also administers the Nursery Education Voucher Scheme.

Government: Capita is a major supplier of software to the government and has also won Civil Service Recruitment and Driving Theory Test administration contracts.

Health: Capita provides IT support in addition to recruitment and selection services for the health sector.

Commercial: Capita has recently assumed management of data services for the Society of Motor Manufacturers and Traders, and has developed a unique 'shadow' outsourcing service in a joint venture with OAO company. The partners provide third-party outsourcing service to other outsourcers in order for the latter to focus on customer relations and service.

International: Capita has worked in partnership with the World Bank, European Commission, and U.K. and overseas governments in the field of public administration. It also advises emerging market economies on development, export strategy, and sustaining business.

Capita believes that its ability to offer services across this broad range differentiates it from its competitors. Also, by building a variety of services into a

contract, the company is aiming to protect itself against price competition.

Capita's outsourcing services include:

- Customer services, such as call centers for customers of client organizations
- Back-office services, such as payroll, pensions, and revenue services
- IT support
- Site services, where Capita provides the infrastructure from which its services are provided

Capita has been developing its offerings in business operations outsourcing in recent years. This area now represents a higher revenue than IT outsourcing.

Capita's integrated outsourcing approach allows it to compete for disparate outsourcing contracts as a "one-stop shop."

Exhibit 4

For example, services can range from estate management to administrative support.

Capita Property Services

The following subsidiaries, with a combined staff of more than 700 employees, constitute Capita Property Services (CPS):

- Beard Dove provides surveying and project management services.
- EDM provides architectural services, including health and safety and interior design.
- Greatorex provides building services and structural consulting engineers.
- Estatecare Group is a multidisciplinary construction consultancy.

Clients

Exhibit 4 details some of Capita's recent contract wins and representative clients.

The Capita Group Plc Major Contract Wins

Industry Sector	Client	Contract	Total Value	Duration
Public Sector	Department of Education & Employment	Nursery Voucher Scheme *	£15m	1996-1999
Public Sector	Department of Education & Employment	Teacher Superannuation Scheme	£72m	1996-2003
Public Sector	Her Majesty's Government	Civil Service Recruitment	N/A	1996-2001
Public Sector	Driving Standards Authority	Written Driving Test Centers	£70m est.	1996-2001
Public Sector	Mendip District Council	Financial Services	N/A	1997-2005
Utilities	Yorkshire Water	Customer Services	£14m	1995-2002
Transport	Society of Motor Manufacturers and Traders	IT Services	£15m	1995-1999
Manufacturing	Westland Helicopters	IT and Customer Support	£7m	1995-2000
Finance	Trustee Savings Bank (TSB)	Payroll Operations	£3.5m	1995-2000

Source: The Capita Group Plc

* Terminated by U.K. government.

Alliances

Capita has few formalized alliances, but enters into joint ventures with customers in connection with outsourcing contracts. Capita forms business partnerships on an ad-hoc basis. An example is the contract with the London Borough of Hounslow, in which Capita teamed with ICL's outsourcing arm, CFM, to win the bid.

Competition

Capita's primary competitors in the IT software and services market include EDS, Vertex, and ICL/CFM. The company's primary competitor in the recruitment market is Parity.

INPUT Assessment

Capita has started a process of diversifying so as to move away from IT outsourcing contracts and complete reliance on local government contracts.

In particular, it has grown its presence in the commercial payroll services and billing services markets. The company says that though IT outsourcing will remain important in its portfolio, it believes that business operations services will increase in importance.

With a broader portfolio of clients, Capita is better positioned to withstand the related competitive pressures. This also makes the company less sensitive to specific market forces, such as an expected slowdown in local government tendering at the end of this century.

Capita's financial data shows a strong, growing company that should be completely capable of addressing these issues.



COMPANY PROFILE

CAPSCO PALLM SYSTEMS (CPS[®])

CPS Building
4040 Vincennes Circle
Indianapolis, IN 46268
(317) 871-4700

William Swan, President
Unit of Swiss Reinsurance Company
Total Employees: 179 (3/90)
Total Revenue, Fiscal Year End
12/31/89: \$18,000,000*

*INPUT estimate

The Company

CAPSCO PALLM Systems (CPS) provides application software products and professional services to the life insurance industry.

CPS was created in March 1988 as a result of the acquisition and subsequent merger of CAPSCO Software, Inc. and Packaged Automated Life/Liability Management, Incorporated (PALLM) by the parent company SwissRe Services, Inc., a unit of Swiss Reinsurance, Zurich.

- CAPSCO Software, a provider of software products and professional services to the life and health insurance industry, was acquired by SwissRe Services in October 1987.
- CAPSCO Software was founded in 1973. The company's principal product is CAPSIL.
- CAPSCO Software had approximately 90 employees at the time of the acquisition and had 1987 revenue of about \$5 million.
- PALLM was acquired by SwissRe Services in January 1988.
- PALLM, founded in 1969 as Lycor, Inc., provided application software products, processing services, and professional services to life/health and property/casualty insurance companies.
- PALLM had 207 employees at the time of the acquisition and estimated revenue of \$15 million for the fiscal year ending March 31, 1988.
- As a result of its acquisition by SwissRe Services, PALLM's operations were restructured as follows:

- PALLM's life insurance division was merged with CAPSCO Software to form CPS.
- PALLM's property/casualty operations became a separate division of SwissRe Services, PALLM Property and Casualty Systems, Inc. The CEO is Keith Settle, President.
- PALLM's data center and computer operations became a separate company called Gateway Information Services, Inc. The CEO is Ray Manganeli, President..

As of March 1990, CPS had approximately 179 employees, segmented as follows:

Marketing and sales	23
Customer support	91
Research and development	56
General and administrative	9
	179

CPS' competitors include the Continuum Company and CYBERTEK Computer Products.

Key Products and Services

Approximately two-thirds of CPS' revenue is derived from systems modification and consulting professional services and one-third from application software products.

CPS' professional services include modification of its software products and systems consulting.

- CPS works primarily with IBM equipment and is an IBM Business Partner.
- Projects range in length from three to eighteen months.
- Pricing for CPS' professional services varies depending on the project and is available upon request.

CPS' current software products include the following:

- CAPSIL, introduced in 1974, is an individual life and health insurance administration system designed to minimize information processing costs. CAPSIL supports traditional policies such as ordinary life, endowment, term, industrial, annuities, premium products, and accident and health insurance, in addition to nontraditional policies such as

universal life, interest-sensitive products, deposit terms, variable life, and equity-linked universal life with multiple funds.

- CAPSIL runs on IBM AS/400, 370, 9370 Model 60, 303X, and 43XX computers running under VM, DOS/VSE, OS/VS, and OS/MVS operating systems.
- There are currently 49 installations of CAPSIL in the U.S. and approximately 135 worldwide.
- In 1987, CAPSCO Software released a DB2 version of CAPSIL. It provides access to management and marketing data bases, allowing full life and health processing capabilities for both traditional and nontraditional products.
- CPS-PRO (Profit/Risk Optimizer) is an asset/liability modeling system. CPS-PRO uses mathematical modeling techniques such as linear programming, stochastic simulation, and statistical analysis to develop strategic planning for interest-sensitive issues.
- CPS-PRO runs in an SAA/CUA-compliant environment using an OS/2 platform.
- There are currently more than 20 installations of CPS-PRO in both the mainframe and microcomputer versions.
- CPS-Laser, introduced in 1990, is a PC-based software package that allows users to design electronic forms, merge them with data generated by their application, and pass the output to a graphically advanced PostScript printer. CPS-Laser supports applications running on IBM PCs or compatibles, AS/400s, or mainframe systems.
- Pricing for CPS' software products and associated services is available upon request.

CAPSIL processing is available through an affiliate company, CAPSCO Administrative Services. Pricing is based on the number of policies on the system and is available upon request.

Industry Markets

One hundred percent of CPS' revenue is derived from the insurance industry.

**Geographic
Markets**

CPS sells its products and services directly from its home office in Indianapolis and sales offices in Chicago (IL) and Dallas (TX). The CAPSIL system may be obtained worldwide through CAPSCO Software offices located in Toronto, Ontario (Canada); Surrey, Guildford (England); Spain; and Australia.

CPS actively markets the system in the Far East and has clients in Japan, Korea, Taiwan, and Hong Kong.

**Computer
Hardware**

CPS' Indianapolis headquarters building has uninterruptable power supply; it has been wired to support heavy automation and can accommodate eight devices per office, including microcomputer, fax, and laser printer.

IBM 3081 and AS/400 computers are used for development and processing services. Various microcomputers are also installed.

A Demonstration Center displays systems screens on a 60" monitor.

The building also includes an expanded Training Center for client training and education.

COMPANY PROFILE

CAPSCO PALLM SYSTEMS (CPS®)

CPS Building
4040 Vincennes Circle
Indianapolis, IN 46268
(317) 871-4700

Chris E. McEvoy, President
William Swan, Executive Vice President and
COO
Unit of Swiss Reinsurance Company
Total Employees: 149 (9/88)
Total Revenue, Fiscal Year End
12/31/88: \$15,000,000*

*INPUT estimate

The Company

CAPSCO PALLM Systems (CPS) provides application software products, processing services, and professional services to the life insurance industry.

CPS was created in March 1988 as a result of the acquisition and subsequent merger of CAPSCO Software Inc. and Packaged Automated Life/Liability Management Incorporated by the parent company Swiss Reinsurance Company (SwissRe).

- CAPSCO Software, a provider of software products, processing services, and professional services to the life and health insurance industry, was acquired by SwissRe in October 1987.
- CAPSCO Software was founded in 1973. The company's principal product is CAPSIL.
- CAPSCO Software had approximately 90 employees at the time of the acquisition and had 1987 revenue of about \$5 million.
- Packaged Automated Life/Liability Management Incorporated (PALLM) was acquired by SwissRe in January 1988.
- PALLM, founded in 1969 as Lycor, Inc., provided application software products, processing services, and professional services to life/health and property/casualty insurance companies.
- PALLM had 207 employees at the time of the acquisition and estimated revenue of \$15 million for the fiscal year ending March 31, 1988.
- As a result of its acquisition by SwissRe, PALLM's operations were restructured as follows:

- PALLM's life insurance division was merged with CAPSCO Software to form CPS.
- PALLM's property/casualty operations became a separate division of SwissRe, PALLM Property and Casualty, Inc. The CEO is Keith Settle, President.
- PALLM's data center and computer operations became a separate computer services company called Gateway, Inc. The CEO is Rich Murray, President..

As of September 1988, CPS had approximately 149 employees, segmented as follows:

Marketing and sales	22
Customer support	69
Research and development	43
General and administrative	<u>15</u>
	149

CPS' competitors include the Continuum Company and CYBERTEK Computer Products.

Key Products and Services

Approximately two-thirds of of CPS' revenue is derived from systems modification and consulting professional services and one-third from application software products. Processing services revenue is negligible.

CPS' professional services include modification of its software products and systems consulting.

- CPS works primarily with IBM equipment.
- Projects range in length from three to eighteen months.
- Pricing for CPS' professional services varies depending on the project and is available upon request.

CPS' current software products include the following:

- CAPSIL, introduced in 1974, is an individual life and health insurance administration system designed to minimize information processing costs. CAPSIL supports traditional policies such as ordinary life, endowment, term, industrial, annuities, premium products, and accident and health insurance, in addition to non-traditional policies such as

universal life, interest sensitive products, deposit terms, and, in Europe, equity linked universal life with multiple funds.

- CAPSIL runs on IBM 370, 9370 Model 60, 303X, and 43XX computers running under VM, DOS/VSE, OS/VS, and OS/MVS operating systems.
 - There are currently 47 installations of CAPSIL and approximately 90 worldwide.
 - In 1987, CAPSCO Software released a DB2 version of CAPSIL. It provides access to the management and marketing data bases, allowing full life and health processing capabilities for both traditional and non-traditional products.
 - Micro CAPSIL, released in 1986, is the version of CAPSIL available for the IBM PC/XT/AT.
 - Micro CAPSIL, offering the same products and policies as CAPSIL, was developed as a complete system for small companies. In addition, CPS markets the product as a test marketing tool for larger companies.
 - PALLM-PRO^R (Profit/Risk Optimizer) is an actuarial system that optimizes profit/risk models. PALLM-PRO uses mathematical modeling techniques such as linear programming, stochastic simulation and statistical analysis to develop strategic planning for interest-sensitive issues.
 - PALLM-PRO runs in both a mainframe and a microcomputer environment.
 - There are currently more than twenty installations of PALLM-PRO, in both the mainframe and microcomputer versions.
 - Pricing for CPS' software products and associated services is available upon request.
- CAPSIL processing is also available through CPS' Service Bureau.
- CAPSIL is CPS' only system currently available through processing services.
 - Pricing is based on the number of policies on the system and is available on request.

Industry Markets

One hundred percent of CPS' revenue is derived from the insurance industry.

Geographic Markets

CPS sells its products and services directly from its home office in Indianapolis and a sales office in Dallas (TX). The CAPSIL system may be obtained worldwide through CAPSCO Software offices located in Toronto, Ontario (Canada); Surrey, Guildford (England); France; and Australia.

Computer Hardware

CPS has recently moved its Indianapolis headquarters to a newly constructed six-story building. The building has uninterruptable power supply; it has been wired to support heavy automation and can accommodate eight devices per office, including a microcomputer, fax, and laser printer.

CPS has an IBM 3081 computer used to provide its processing services as well as various microcomputers installed on-site.

A Demonstration Center has been installed at the new headquarters that displays systems screens on a 60" monitor.

The building also includes an expanded Training Center for client training and education.

COMPANY PROFILE

CAPSCO SOFTWARE INTERNATIONAL

100 West 22nd Street
Lombard, IL 60148
(312) 495-8620

Herb Kerns, Chairman
Bill Swan, President, CAPSCO
Worldwide
George Tindal, President, CAPSCO
Canada
Private Corporation
Total Employees: 150 (12/85)
Total Revenue, Fiscal Year Ended
12/31/85: \$10,000,000*

THE COMPANY

- CAPSCO Software International, founded in 1973, provides software products and associated support services, processing services, and professional services to the insurance industry.
- In 1986, CAPSCO formed three companies:
 - CAPSCO Worldwide is responsible for the development of systems and worldwide distribution.
 - CAPSCO U.S.A. handles sales and support of products and services in the U.S.
 - CAPSCO Canada handles sales and support of CAPSCO products and services in Canada.
- CAPSCO's competitors include The Continuum Company, CYBERTEK Computer Products, and PALLM.

KEY PRODUCTS AND SERVICES

- Approximately 45% of 1985 revenue was derived from application software products and associated support services, 45% from professional services, and 10% from processing services.
- CAPSCO software products include the following:
 - CAPS-I-L, introduced in 1974, is an individual life and health insurance administration system designed to minimize information processing costs. CAPS-I-L supports traditional policies such as ordinary life, endowment, term, industrial, annuities, premium products, and accident and health insurance, in addition to non-traditional policies such as universal life, interest sensitive products, deposit terms, and, in Europe, equity linked universal life with multiple funds.

*INPUT estimate

CAPSCO SOFTWARE INTERNATIONAL

- CAPS-I-L runs on IBM 370, 303X, and 43XX computers running under DOS/MVS, DOS/VSE, OS/VS operating systems and Burroughs, Hewlett-Packard, Prime, and Wang equipment supporting ANSI COBOL.
- There are currently more than 80 installations of CAPS-I-L.
- Micro CAPS-I-L, released in 1986, is the version of CAPS-I-L available for the IBM PC, PC/XT, and PC/AT.
- Micro CAPS-I-L, offering the same products and policies as CAPS-I-L, was developed as a complete system for small companies. In addition, CAPSCO markets the product as a test marketing tool for larger companies.
- CAPS-GROUP, introduced in 1978, is a group life and health insurance administration system offering products and policies for group insurance.
- The system runs on the IBM 370, 303X, and 43XX, as well as Burroughs, Hewlett-Packard, Prime, and Wang equipment supporting ANSI COBOL. No micro version is available.
- CAPS-CLAIM is a claim administration system for both individual and group businesses. CAPS-CLAIM includes a tax reporting module option.
- The system was introduced in 1978 and runs on the same equipment as CAPS-I-L and CAPS-GROUP. No micro version is available.
- CAPS-INVEST is an investment portfolio administration system.
- The system was introduced in 1979 and runs on the same equipment as CAPSCO's other software packages. No micro version is available.
- Pricing for CAPSCO's software products and associated services is available upon request.
- CAPS-I-L is also available as a processing service. CAPSCO provides the service on Prime equipment, running under the PRIMOS operating system, via leased lines connecting terminals at customer sites.
- CAPS-I-L is CAPSCO's only system currently available through processing services.
- Pricing is based on the number of policies on the system and is available upon request.

CAPSCO SOFTWARE INTERNATIONAL

- CAPSCO's professional services include modification of its software products, systems consulting, and facilities management.
 - CAPSCO works primarily with IBM and Prime equipment.
 - Projects range in length from three to eighteen months.
 - Pricing for CAPSCO's professional services varies depending on the project and is available upon request.

INDUSTRY MARKETS

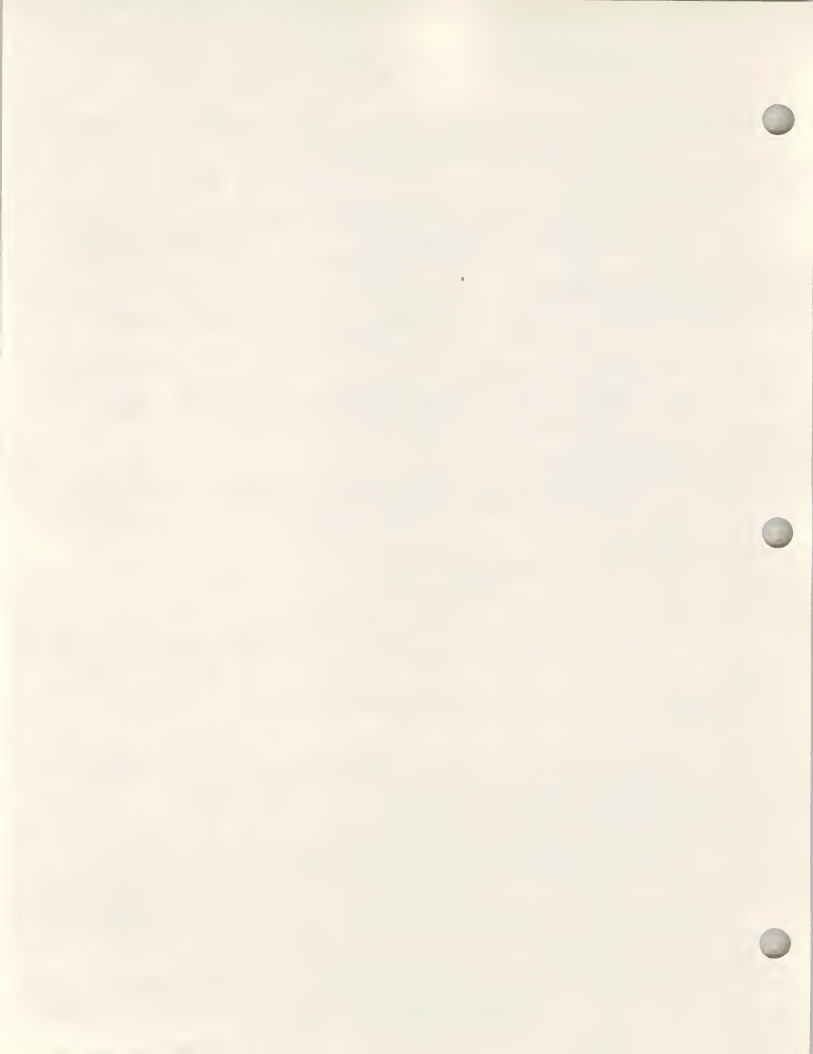
- One hundred percent of CAPSCO's 1985 revenue was derived from the insurance industry.

GEOGRAPHIC MARKETS

- CAPSCO sells its products and services directly from its offices located in Lombard (IL), Atlanta (GA), Toronto, Ontario (Canada) and Surrey, Guildford (England).

COMPUTER HARDWARE

- CAPSCO has a Prime computer used to provide its processing services, as well as various personal computers installed on-site.



(Bob Cohen)
Removed from Dis.
now PT of
Imperial

Jerry Donnelly,
Manager, Systems Support

COMPANY HIGHLIGHT

CARTER ASSOCIATES
670 Almanos Avenue
Sunnyvale, CA 94086
(408) 739-3230

↓
Rene L. Eris, President
Privately held: 100% owned
by officers and employees
Total employees: 95
Sales, fiscal year end 12/31/76:
\$2.8 million

COMPANY BACKGROUND:

- Carter Associates was organized in 1962 as a consulting and contract programming company. In 1969, the company began to expand into batch processing when clients like Itek and Data Pathing decided to use an external data processing bureau.
- Between 1969 and 1974, the company's business continued to grow as a result of referrals from satisfied local customers. Carter's growth was also aided by the expansion of local semiconductor companies such as Intel. Until recently, Carter performed all of Intel's data processing.
- In 1975, the recession hit Silicon Valley. Because of its dependence on semiconductor houses, Carter's business suffered. At this point, Rene L. Eris was brought in as President. With him, Eris brought new people, new discipline, and a new business philosophy.

OVERALL ASSESSMENT:

- Carter Associates is two distinct but related businesses—the first is the service bureau business refurbished and given new marketing muscle. It still operates old, though almost fully depreciated, equipment. The second, Carter's Data Base Software, is evolving in parallel to develop a nationwide OEM computer sales business.
- The new venture is internally financed and represents an attempt by management to shield the company from the limitations of the service bureau business.
- Carter's objective with the new business is to produce an efficient hardware/software system which is dedicated to data base management.
- Carter will offer Tandem Computers, Inc.'s Tandem 16 NonStop Computer System on an OEM basis with a Carter-

COMPANY HIGHLIGHT/CARTER ASSOCIATES

developed data base management system.

- The Tandem 16 is a modular minicomputer system where multiple mini processors perform standard computer processing and provide backup capability for each other. The system will use simple English language commands.
- Carter has an OEM agreement with Tandem and is currently setting up six distributors throughout the U. S.
- Details on the data base system performance have not yet been publicly released.
- The plan is ambitious. Without performance specifications, however, it is difficult to project the degree of its financial and technical success.

KEY PRODUCTS AND SERVICES:

- Carter Associates offers a variety of services for manufacturing, marketing, and accounting applications.
- The company's manufacturing services include process flow, bill of materials, job and project costing, shop work orders, materials requirements planning, and inventory and purchase order applications.
- Accounting services include labor and personnel reporting, general ledger accounts receivable, and accounts payable applications.
- Marketing services include sales order/accounts receivable and personnel reporting applications.
- Data processing services are the company's primary revenue source, as shown below:
 - Data processing services 75%
 - Associated data entry 15%
 - Contract programming 5%
 - Computer output microfilm 5%

INDUSTRY MARKETS

- Carter has a total of 44 clients primarily in the manufacturing industry. Sixty-eight percent of these clients represent 90% of Carter revenues. Twenty-three percent of the clients account for 90% of the revenues.

December/1976

COMPANY HIGHLIGHT/CARTER ASSOCIATES

GEOGRAPHIC MARKETS:

- All of Carter's business is concentrated in the Pacific States.

COMPUTER HARDWARE AND SOFTWARE:

- In 1969 Carter leased an IBM 360/30 to provide its remote computing services.
- In 1972 this was upgraded to a 360/40, and a second 360/40 was added in 1973.
- In 1976 one of the 360/40s will be replaced with a 360/65.
- There is also one Memorex 1270 communications processor, eight Calcomp 2314-equivalent disc drives, ten magnetic tape drives, and three IBM 1403 line printers.
- Most of the equipment is owned by Carter Associates.

COMPANY BRIEF

Primary Industry-Specific Market: Education

CARS Information Systems Corporation

4000 Executive Park Drive
Cincinnati, OH 45241
(513) 563-4542

CEO: John Pierce, President
Private Company
Founded: 1969

Employees: 20 (12/86)
Revenue (FYE 6/30/86): \$2 million*

The Company: Develops and markets an integrated on-line campus administration system

Sources of Revenue:

- Turnkey Systems (70%)
- Application Software (30%)

Key Products:

- Application Software and Turnkey Systems (Utilizes DEC VAX minicomputers)
 - Administrative system for post-secondary schools (CARS)
 - CARS runs under UNIX bsd 4.2, System V.3, and ULTRIX-32 operating systems

Target Industries:

- Higher education (100%)

Geographic Markets:

- U.S. (100%)
- Sales Office: Cincinnati (OH)

*INPUT estimate

December 1986



COMPANY PROFILE

CARTER-PERTAINE, INC.

1500 South Dairy Ashford
Suite 400
Houston, TX 77077
(713) 558-1270

Arley Carter, President
Private Company
Total Employees: 50
Total Revenue, Fiscal Year End
9/30/90: \$5,000,000*

*INPUT estimate

The Company

Carter-Pertaine, Inc. develops and markets HP 3000-based application software products to educational institutions and school districts for financial information management and student recordkeeping.

Carter-Pertaine was formed in February 1989 with the merger of Pertaine Systems, Inc. of Redwood City (CA) and Carter Schaefer & Co. of Houston (TX). Both firms developed and marketed HP 3000-based school administration software products.

- Carter Schaefer, founded in 1980, had approximately 20 employees at the time of the merger.
- Pertaine Systems, also founded in 1980, had approximately 30 employees at the time of the merger.

Key Products and Services

One hundred percent of Carter-Pertaine's revenue is derived from application software products and associated support services.

Carter-Pertaine's application software products are available for HP 3000 computers and include the following:

- SCHOOL/3000 is an accounting and finance management system. There are currently over 80 installations of SCHOOL/3000.
- STUDENT/3000 is a student recordkeeping system.
- EXPLAIN/3000 is an on-line, menu-driven, documentation system that supports the company's other products.

Industry Markets

One hundred percent of Carter-Pertaine's revenue is derived from the education industry.

Clients include school districts with 1,200 to over 45,000 students, high schools, county-level districts, and junior colleges.

Geographic Markets

One hundred percent of Carter-Pertaine's revenue is derived from the U.S.

Carter-Pertaine has clients across the U.S., although the largest concentration of customers is in Texas and California.

In addition to its headquarters in Houston, the company has an office in Redwood City (CA).

**COMPANY
PROFILE**

CASS LOGISTICS, INC.

13001 Hollenberg Drive
Bridgeton, MO 63044
Phone: (314) 770-2231
Fax: (314) 770-5955

Chairman, President, and CEO:	Lawrence A. Collett
Status:	Subsidiary
Parent:	Cass Commercial Corporation
Total Employees:	400
Total Revenue:	\$20,286,000
Fiscal Year End:	12/31/92

Key Points

- Cass Logistics, Inc. (CLI) provides audit, payment, cost accounting, and control of transportation and warehousing transactions for manufacturers and distributors.
- During 1992, CLI began development of IBM AS/400-based transportation management software, available to clients for in-house use.
- A significant number of freight payment accounts were added during 1992 with the acquisition of the freight payment customers of Bank of America and NationsBank.

**Company
Description**

Cass Logistics, Inc. (CLI), founded in 1956, provides transaction processing, applications software, and associated professional services for integrated logistics management. CLI clients include process and discrete manufacturers, distributors, and transportation carriers.

Cass Commercial Corporation, CLI's parent, is a bank holding company for two major subsidiaries--CLI, the larger of the two subsidiaries, and Cass Bank & Trust Company, a commercial bank founded in 1906.

Strategy

CLI's strategy for growth is to continue with its current product line.

CLI's integrated freight payment, freight audit, rating, and software systems permit clients to outsource the accounting and control of logistics costs. In some cases, CLI processes information on the movement of materials and supplies into production, work-in-process transfers, movement of finished products to distribution centers, storage, handling, and delivery to the point of sale in general-ledger accounting detail.

IBM mainframe and AS/400 software is licensed for user installation with major functionality in the areas of freight rate maintenance, retrieval, carrier selection, shipment planning, EDI rate upload/download, and rail routing.

Financials

CLI's 1992 revenue was \$20.3 million, a 15% decrease from 1991 revenue of \$23.7 million. Losses before taxes were \$1.3 million in 1992, compared to income before taxes of \$2.5 million for 1991. A five-year financial summary follows:

**CASS LOGISTICS, INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR				
	1992	1991	1990	1989	1988
Revenue	\$20,286	\$23,732	\$25,582	\$23,414	\$20,024
Percent increase (decrease) from previous year	(15%)	(7%)	9%	17%	N/A
Income (loss) before taxes	\$(1,321)	\$2,509	\$4,938	\$3,830	\$2,950
Percent increase (decrease) from previous year	(153%)	(49%)	29%	30%	N/A

Market Financials

CLI derived 90% of its 1992 revenue from manufacturers and distributors and the remaining 10% from the transportation industry.

CLI's customers include 100 of the Fortune 500 leading manufacturers.

Transportation carriers are growing among the users of CLI's rating and software business.

Approximately 80% of CLI's revenue is derived from processing services, 10% from applications software product licenses, and 10% from professional services.

Geographic Markets

CLI derived 100% of its 1992 revenue from North American businesses.

Services provided include the processing of international transportation transactions from, to, and across the U.S.

**Operations/
Structure**

CLI is organized into two groups as follows:

- The Payment Systems Group, based in St. Louis (MO) with an office in Columbus (OH), provides freight payment and freight audit processing services.
- The Software Systems Group, based in Chicago (IL), supports CLI's rating and software business.

Employees

Approximately 400 of Cass Commercial Corporation's 500 employees are associated with CLI.

Acquisitions

During 1992, CLI acquired the freight payment customers of Bank of America and NationsBank.

**Key Products
and Services**

CLI's logistics-related services include processing and payment of freight charges, preparation of transportation management reports, auditing of freight charges, and rating of freight shipments.

CLI's freight payment and freight audit processing services are supported by redundant Tandem NonStop computers located in St. Louis (MO) and Columbus (OH).

- Processing of freight transactions is supported by the following systems:
 - Transdata[®], a transportation reporting system designed to monitor the activity and costs associated with inbound and outbound freight
 - Transaction[™], a data base information system used to manage and update historical transportation information
 - Freightpay[®], an accounts payable system that makes payments to carriers, and provides reports on payment information
 - Translink[™], a financial control system that matches preauthorized order records of transportation activities with related freight expenditures
- CLI processes 18 million transactions annually, with a value exceeding \$4 billion, for more than 800 manufacturers and distributors.

CLI's rating and software business is headquartered in Chicago (IL). Rate management, rate information, and shipment planning systems are available to clients for license on in-house IBM mainframes or AS/400s, or as a processing service.

Mainframe-based products include the following:

- Rate Management Systems:
 - Ratemaker[®]/First Rate work together to provide a system for maintaining and using rate information. The system is designed to handle most types of rates, from the simplest to the most complex. The system provides interfaces to interconnect rate information into user applications such as order costing, shipment planning, customer service, and freight bill audit. There are currently 100 users of the system.
 - RailRate[®] is designed to satisfy the RailRate information requirements of today's deregulated environment. RailRate manages rates, cost shipments, and route movements.
- Rate Information Systems:
 - Best Rate is a system that works with CLI's Rate Management Systems to provide carrier-ranking inquiries.

- Rate Advice works with CLI's Rate Management Systems to extract rates for reporting purposes or for other systems.
- Rate Exchange works with CLI's Rate Management Systems to upload or download rates from other systems. Rates can be transferred in standard EDI formats. PC Rate Exchange, introduced in 1992, is a PC tool providing access to the mainframe version of Rate Exchange.
- Shipment Planning Systems:
 - Ship Plan Consolidation evaluates orders and determines if they should be shipped Truckload, Consolidated Truckload, LTL Direct, or through a pool. The system makes economical decisions based on available rates and user-provided parameters.
 - Ship Plan Carrier Selection works on a standalone basis or with Ship Plan Consolidation to assign shipments to specific carriers based on carrier costs and user-provided parameters.
- CLI currently has approximately 60 mainframe clients with in-house systems and 300 processing/service bureau clients.

The Cass Logistics Transportation Management System is a set of AS/400-based software tools for shippers to control and drive down their cost of transportation. Products include the following:

- Rate Management System (RMS) stores, determines and calculates the rates necessary to make carrier selections and provide accurate shipping costs for accruals and prepay-and-add billing systems.
- Dynamic Carrier Selection System (DCSS) provides the connection between the user's order processing/shipping systems and Cass shipment costing for an automated, expert system carrier selection process.
- Freight Pay System (FPS) links shipment activity and accounts payable authorization and control, ensuring that the correct amount is paid for transportation in either a manual, EDI, or auto-pay mode.
- Shipment Information Data Base (SIDB) is a repository for freight bill payment histories and shipment and delivery information in support of distribution analysis and modeling.
- Geographic Data Base (GDB) provides geographic, rate, and distance data for comprehensive and accurate distance calculation and fixed point references for all forms of tariff rate basing.

- CLI currently has two AS/400 clients in beta test.

CLI also offers professional services in support of its software and processing services. The services offered include the following:

- Customer and technical support
- Documentation
- Consulting and training
- Custom development services
- Rate/loading

**Marketing
and Sales**

CLI markets its products and services through a direct sales force and through alliances with various vendors.

Alliances

CLI is an IBM Business Partner and is being considered as an Andersen Consulting Preferred Provider.

Clients

Major software clients include AMOCO, CRST, Dow Chemical, J.B. Hunt, KMart, Schneider National, and Union Carbide.

Major payment service clients include Ashland Chemical, Emerson Electric, Lever Bros., Monsanto, NALS, Nestle, Nabisco Foods, Sears, Sherwin Williams, and Quaker Oats.

COMPANY PROFILE

CASS LOGISTICS, INC.

(formerly Cass Information Systems, Inc.)
1015 Locust Street
St. Louis, MO 63101
(314) 621-4121

Harry J. Krieg, Chairman
Lawrence A. Collett, President
and CEO
Subsidiary of Cass Commercial
Corporation
Total Employees: 400
Total Revenue, Fiscal Year End
12/31/90: \$25,582,000

The Company

Cass Logistics, Inc. (CLI), founded in 1956, provides transaction processing, application software, and associated professional services for integrated logistics management. CLI clients include process and discrete manufacturers, distributors, and transportation carriers.

- CLI's integrated freight payment, freight audit, rating, and software systems permit clients to outsource the accounting and control of logistics costs. In some cases, CLI processes information on the movement of materials and supplies into production, work-in-process transfers, movement of finished products to distribution centers, storage, handling, and delivery to the point of sale in general-ledger accounting detail.
- IBM mainframe software is licensed for user installation with major functionality in the areas of rate maintenance, retrieval, carrier selection, shipment planning, EDI rate upload/download, and rail routing.

CLI operated as Cass Information Systems, Inc. until late 1989 when the company changed its name to Cass Logistics, Inc. in order to more accurately reflect the range of its products and services.

Cass Commercial Corporation, CLI's parent, is a bank holding company for two major subsidiaries - CLI, the larger of the two subsidiaries, and Cass Bank & Trust Company, a commercial bank founded in 1906. For 1990, the corporation reported total operating income of \$35.4 million and net income of \$5.9 million.

- According to the industry segment reporting required by the SEC, CLI's 1990 revenue reached \$25.6 million, a 9% increase over 1989 revenue of \$23.4 million. Earnings before taxes reached \$4.9 million, compared to \$3.8 million in 1989. A three-year financial summary for CLI follows:

**CASS LOGISTICS, INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR		
	1990	1989	1988
Revenue	\$25,582	\$23,414	\$20,024
Percent increase from previous year	9%	17%	N/A
Earnings before taxes	\$4,938	\$3,830	\$2,950
Percent increase from previous year	29%	30%	N/A

CLI annually spends approximately 33% of earnings on software development, including enhancements to its existing products.

Acquisitions made by CLI during 1989 include the following:

- In May 1989, CLI acquired the payment business for approximately 200 accounts of the C&S Bank of Atlanta. This business allowed CLI to further expand its Freightpay products into the Atlanta market. This business is being processed at CLI's Columbus (OH) facility.
- In July 1989, CLI acquired certain mainframe-based shipment planning software from Cleveland Consulting Associates. This software is being maintained and serviced at CLI's Chicago facility.

Approximately 400 of Cass Commercial Corporation's 500 employees are associated with CLI.

Key Products and Services

Approximately 80% of CLI's revenue is derived from processing services, 10% from application software product licenses, and 10% from professional services.

CLI's logistics-related services include processing and payment of freight charges, preparation of transportation management reports, auditing of freight charges, and rating of freight shipments.

CLI's freight payment and freight audit processing services are supported by redundant Tandem NonStop computers located in St. Louis (MO) and Columbus (OH).

- Processing of freight transactions is supported by the following systems:
 - Transdata[®], a transportation reporting system designed to monitor the activity and costs associated with inbound and outbound freight
 - Transaction[™], a data base information system used to manage and update historical transportation information
 - Freightpay[®], an accounts payable system that makes payments to carriers, and provides reports on payment information
 - Translink[™], a financial control system that matches preauthorized order records of transportation activities with related freight expenditures
- CLI processes 18 million transactions annually, with a value exceeding \$4 billion, for more than 700 manufacturers and distributors.

CLI's rating and software business is headquartered in Chicago (IL). Rate management, rate information, and shipment planning systems are available to clients for license on in-house IBM mainframes or as a processing service.

- Rate Management Systems available from CLI include the following:
 - Ratemaker[®]/First Rate work together to provide a system for maintaining and using rate information. The system is designed to handle most types of rates, from the simplest to the most complex. The system provides interfaces to interconnect rate information into user applications such as order costing, shipment planning, customer service, and freight bill audit. There are currently 100 users of the system.
 - Railrate[®] is a new system designed to satisfy the Railrate information requirements of today's deregulated environment. Railrate manages rates, cost shipments, and route movements. Railrate will be available in early 1991 and already has over 20 firms committed to its use.

- Rate Information Systems include the following:
 - Best Rate is a system that works with CLI's Rate Management Systems to provide carrier-ranking inquiries.
 - Rate Advice works with CLI's Rate Management Systems to extract rates for reporting purposes or for other systems.
 - Rate Exchange works with CLI's Rate Management Systems to upload or download rates from other systems. Rates can be transferred in Transportation Data Coordinating Committee (TDCC) standards or in proprietary formats.
- Shipment Planning Systems include the following:
 - Ship Plan Consolidation evaluates orders and determines if they should be shipped Truckload, Consolidated Truckload, LTL Direct, or through a pool. The system makes economical decisions based on available rates and user-provided parameters.
 - Ship Plan Carrier Selection works on a standalone basis or with Ship Plan Consolidation to assign shipments to specific carriers based on carrier costs and user-provided parameters.

CLI also offers professional services in support of its software and processing services. The services offered include the following:

- Customer and technical support
- Documentation
- Consulting and training
- Custom development services
- Rate/loading

Industry Markets

CLI derived 90% of its 1990 revenue from manufacturers and distributors and the remaining 10% from the transportation industry.

CLI's customers include 100 of the Fortune 500 leading manufacturers.

Transportation carriers are growing among the users of CLI's rating and software business. Major carrier clients include J.B. Hunt, Schneider National, North American Van Lines, CRST, CP Trucking, Kingsway, and Grand Trunk Western Railroad.

**Geographic
Markets**

CLI derived 100% of its 1990 revenue from North American businesses.

Services provided include the processing of international transportation transactions from, to, and across the U.S.

**Computer
Hardware**

CLI has redundant mainframe Tandem computers in St. Louis and Columbus in support of freight payment and freight audit processing services. Clients access the data centers via dedicated lines.

COMPANY PROFILE

CASS LOGISTICS, INC.

(formerly Cass Information Systems, Inc.)
1015 Locust Street
St. Louis, MO 63101
(314) 621-4121

Harry J. Krieg, Chairman
Lawrence A. Collett, President
and CEO
Subsidiary of Cass Commercial
Corporation
Total Employees: 500
Total Revenue, Fiscal Year End
12/31/89: \$12,100,000*

* Excludes interest income

The Company

Cass Logistics, Inc. (CLI), founded in 1956, provides transaction processing, application software, and associated professional services for integrated logistics management. CLI clients include process and discrete manufacturers, distributors, and transportation carriers.

- CLI's integrated freight payment, freight audit, rating, and software systems permit its clients to outsource the accounting and control of their logistics costs. In some cases, CLI processes information on the movement of materials and supplies into production, work in process transfers, movement of finished products to distribution centers, storage, handling, and delivery to the point of sale in general ledger accounting detail.

CLI operated as Cass Information Systems, Inc. until late 1989 when the company changed its name to Cass Logistics, Inc. in order to more accurately reflect the range of its products and services.

Cass Commercial Corporation, CLI's parent, is a bank holding company for two major subsidiaries—CLI, the larger of the two subsidiaries, and Cass Bank & Trust Company, a commercial bank founded in 1906. For 1989, the corporation reported total operating income of \$32.6 million and net income of \$5.4 million.

- According to the consolidated statements of income, approximately \$12.1 million of operating income was derived from revenue from information services (CLI), with \$9.2 million from freight payment and processing revenue and \$2.9 million from freight rating services income. These figures do not, however, include the interest on freight bills that CLI processes.

- For 1989, it is estimated that CLI's operations contributed \$3.5 million to the corporation's total net income.

CLI annually spends approximately 25% of earnings on software development, including enhancements to its existing products.

Acquisitions made by CLI during 1989 include the following:

- In May 1989, CLI acquired the payment business for approximately 200 accounts of the C&S Bank of Atlanta. This business allowed CLI to further expand its Freightpay products into the Atlanta market. This business is being processed at CLI's Columbus (OH) facility.
- In July 1989, CLI acquired certain mainframe-based shipment planning software from Cleveland Consulting Associates. This software is being maintained and serviced at CLI's Chicago facility.

Approximately 500 of Cass Commercial Corporation's 600 employees are associated with CLI.

CLI's major competition comes from in-house data processing operations.

Key Products and Services

Approximately 80% of CLI's revenue is derived from processing services, 10% from application software product licenses, and 10% from professional services.

CLI's logistics-related services include processing and payment of freight charges, preparation of transportation management reports, auditing of freight charges, and rating of freight shipments.

CLI's freight payment and freight audit processing services are supported by redundant Tandem NonStop computers located in St. Louis (MO) and Columbus (OH).

- Processing of freight transactions is supported by the following systems:
 - Transdata[®], a transportation reporting system designed to monitor the activity and costs associated with inbound and outbound freight
 - Transaction[™], a data base information system used to manage and update historical transportation information

- Freightpay[®], an accounts payable system that actually makes required payments when they are due, and provides reports on payment information
- Rate-check[™], a freight bill auditing system that provides tariff maintenance and correction filing. The system is flexible and may be used in a pre-audit, immediate audit, or post-audit environment.
- Translink[™], a financial control system that matches preauthorized order records of transportation activities with related freight expenditures
- CLI processes 18 million transactions annually, with a value exceeding \$4 billion, for more than 700 manufacturers and distributors.

CLI's rating and software business is headquartered in Chicago (IL). Rate management, rate information, and shipment planning systems are available to clients for license on in-house IBM mainframes or as a processing service.

- Rate Management Systems available from CLI include the following:
 - Ratemaker[®]/First Rater work together to provide a system for maintaining and using rate information. The system is designed to handle most types of rates, from the simplest to the most complex. The system provides interfaces to interconnect rate information into user applications such as order costing, shipment planning, customer service, and freight bill audit. There are currently 100 users of the system.
 - Railrate[®] is a new system designed to satisfy the Railrate information requirements of today's deregulated environment. Railrate manages rates, cost shipments, and routes movements. Railrate will be available in early 1991 and already has over 20 firms committed to its use.
- Rate Information Systems include the following:
 - Best Rate is a system that works with CLI's Rate Management Systems to provide carrier ranking inquiries.
 - Rate Advice works with CLI's Rate Management Systems to extract rates for reporting purposes or for other systems.

- Rate Exchange works with CLI's Rate Management Systems to upload or download rates from other systems.
- Shipment Planning Systems include the following:
 - Ship Plan Consolidation evaluates orders and determines if they should be shipped Truckload, Consolidated Truckload, LTL Direct, or through a pool. The system makes economical decisions based on available rates and user-provided parameters.
 - Ship Plan Carrier Selection works on a standalone basis or with Ship Plan Consolidation to assign shipments to specific carriers based on carrier costs and user-provided parameters.

CLI also offers professional services in support of its software and processing services. The services offered include the following:

- Customer and technical support
- Documentation
- Consulting and training
- Custom development services
- Rate/loading

Industry Markets

CLI derived more than 90% of its 1989 revenue from manufacturers and distributors and the remaining 10% from the transportation industry.

CLI's customers include 100 of the Fortune 500 leading manufacturers.

Transportation carriers are growing among the users of CLI's rating and software business. Major carrier clients include J.B. Hunt, Schneider National, North American Van Lines, CRST, Kingsway, and Grand Truck Western Railroad.

Geographic Markets

CLI derived 100% of its 1989 revenue from North American businesses.

Services provided include the processing of international transportation transactions from, to, and across the U.S.

**Computer
Hardware**

CLI has redundant mainframe Tandem computers in St. Louis and Columbus in support of its freight payment and freight audit processing services. Clients access the data centers via dedicated lines.

The rating and software business in Chicago has access to an IBM mainframe for research and development and software support.

COMPANY BRIEF

Primary Industry-Specific Market: Transportation

Cass Information Systems, Inc.

1015 Locust Street
St. Louis, MO 63101
(314) 621-4121

CEO: Lawrence Collett, President
Subsidiary of: Cass Commercial Corporation
Founded: 1956

Employees: 170 (11/86), 160 (12/85)
Revenue (FYE 12/31/86): \$13,000,000*

The Company: Cass Information Systems provides processing services primarily to the transportation industry

Sources of Revenue:

- Processing Services (100%)

Key Products and Services:

- Processing Services (Utilizes Tandem NonStop TXP)
 - Cass Information Systems provides the following transportation applications utilizing a Tandem NonStop TXP which customers access via phone lines
 - Transdata is a transportation reporting system designed to monitor and reduce the cost of inbound and outbound freight
 - Transaction is a data base information system used to manage and update historical transportation information
 - Freightpay is an accounts payable system that handles freight payments and monitors cash flow
 - Rate-Check is a freight bill auditing system that can be used in pre-audit, immediate audit, and post-audit environments
 - Translink is a financial control system that matches pre-authorized order records of transportation activities with related freight expenditures
 - Compu-Rate is a client-based rating system that includes computer rating, auditing, tariff maintenance, rate quotation, prepay and add invoicing, and shipment planning

Target Industries:

- Transportation
- Fortune 500 companies in other industries

Geographic Markets:

- U.S. (100%)
- Direct sales

*INPUT estimate

December 1986



COMPANY PROFILE

CASS INFORMATION SYSTEMS, INC.

1015 Locust Street
St. Louis, MO 63101
(314) 621-4121

Harry J. Krieg, Chairman
Lawrence A. Collett, President
and CEO
Subsidiary of Cass Commercial
Corporation
Total Employees: 110*
Total Revenue, Fiscal Year End
12/31/88: \$11,000,000*

* INPUT estimate

The Company

Cass Information Systems, Inc. (CIS), founded in 1956, is a supplier of processing services, application software, and professional services in support of transportation and logistics activities.

- Cass Commercial Corporation, CIS' parent, is a holding company maintaining a bank and trust company (Cass Bank & Trust Company) and a business consulting operation (Cass Business Consultants). Cass Commercial Corporation recorded 1988 revenue of over \$30 million.

In December 1987, CIS acquired Comtrac Information Systems, Inc. (Comtrac) from the First National Bank of Chicago.

- Comtrac provides software and services to the transportation industry.
- INPUT estimates Comtrac's 1987 revenue was \$6 million.
- The acquisition of Comtrac more than doubled CIS revenue.

INPUT estimates that CIS' 1988 revenue reached approximately \$11 million.

CIS maintains its headquarters in St. Louis, and provides processing and professional services from that office.

With the acquisition of Comtrac, CIS now has the following subsidiary locations:

- Comtrac Rating Systems, located in Chicago (IL), provides rating software and services to the transportation industry.

- Comtrac Information Systems, located in Columbus (OH), offers data processing for CIS and Comtrac customers.

INPUT estimates that as of December 31, 1988 CIS had 110 full-time employees.

Key Products and Services

CIS offers systems to automate the functions of freight transportation.

CIS processing services include:

- Transdata[®], a transportation reporting system designed to monitor the activity and costs associated with inbound and outbound freight.
- Transaction[™], a data base information system used to manage and update historical transportation information.
- Freightpay[®], an accounts payable system that actually makes required payments when they are due, and provides reports on payment information.
- Rate-Check[™], a freight bill auditing system that provides tariff maintenance and correction filing. The system is flexible and may be used in a pre-audit, immediate audit, or post-audit environment.
- Translink[™], a financial control system that matches pre-authorized order records of transportation activities with related freight expenditures.
- Compu-Rate[®], a client-based rating system that includes computer rating, auditing, tariff maintenance, rate quotation, prepay-and-add invoicing, and shipment planning.
 - Compu-Rate is a product of Transportation Concepts & Services (TCS) and is offered as a software package by TCS.

The software packages currently offered by CIS were acquired with the acquisition of Comtrac. The software packages currently offered include:

- MileMaker[®], a product of Rand McNally-TDM, Inc., is offered by CIS as a software package or a processing service.
 - MileMaker is an interactive system designed to handle transportation analysis, fuel tax reporting, and vehicle

routing and scheduling. MileMaker integrates HHG shortest-distance rating mileages with freight rating, pricing, auditing, and accounting functions.

- Ratemaker[®] is an automated tariff management system providing an electronic tariff library, maintenance of tariff records, and immediate access to tariff information. Ratemaker currently has over 80 users.
- First Rate[®] is an automated pre-audit rating system designed to assist in calculating shipping charges at the lowest lawful charge.
- Rate Advice creates tariff reports based on data obtained from the Ratemaker, Milemaker, and First Rate systems. Rate Advice currently has 19 users.
- Best Rate is a system that works in conjunction with Ratemaker and First Rate in order to provide a ranking of available carriers based on cost. Best Rate currently has over 30 users.
- Consolidation Optimizer integrates CIS' rating software with Optimal Decision System's freight consolidation logic. Orders are evaluated to determine if they should be shipped LTL direct, in truckloads with stops, or using a pool distribution center. The package also evaluates truckloads and compares them to carrier availability, contractual obligations and pricing to determine the optimal routing. The system runs on 370 Architecture machines and is available both as a software package and a processing service.

CIS offers professional services in support of its software and processing services. The services offered include the following:

- Data entry
- Data structuring
- Programming support
- Documentation and maintenance control
- Systems analysis
- Various other consulting services specifically for the transportation industry

Industry Markets

INPUT estimates CIS derived 100% of its 1988 revenue from the transportation industry.

Geographic Markets

CIS derived 100% of its 1988 revenue from the U.S.



COMPANY PROFILE

CARTER-PERTAINE, INC.

1500 South Dairy Ashford
Suite 400
Houston, TX 77077
(713) 558-1270

Arley Carter, President
Private Company
Total Employees: 50
Total Revenue, Fiscal Year End
9/30/89: \$5,000,000*

*INPUT estimate

The Company

Carter-Pertaine, Inc. develops and markets HP 3000-based application software products to educational institutions and school districts for financial information management and student recordkeeping.

Carter-Pertaine was formed in February 1989 with the merger of Pertaine Systems, Inc. of Redwood City (CA) and Carter Schaefer & Co. of Houston (TX). Both firms developed and marketed HP 3000-based school administration software products.

- Carter Schaefer, founded in 1980, had approximately 20 employees at the time of the merger.
- Pertaine Systems, also founded in 1980, had approximately 30 employees at the time of the merger.

Key Products and Services

One hundred percent of Carter-Pertaine's revenue is derived from application software products and associated support services.

Carter-Pertaine's application software products are available for HP 3000 computers and include the following:

- SCHOOL/3000 is an accounting and finance management system. There are currently over 80 installations of SCHOOL/3000.
- STUDENT/3000 is a student recordkeeping system.
- EXPLAIN/3000 is an on-line, menu-driven, documentation system that supports the company's other products.

Industry Markets

One hundred percent of Carter-Pertaine's revenue is derived from the education industry.

Clients include school districts with 1,200 to over 45,000 students, high schools, county-level districts, and junior colleges.

**Geographic
Markets**

One hundred percent of Carter-Pertaine's revenue is derived from the U.S.

Carter-Pertaine has clients across the U.S., although the largest concentration of customers is in Texas.

In addition to its headquarters in Houston, the company has an office in Redwood City (CA).

COMPANY BRIEF

Primary Industry-Specific Market: Telecommunications

Cellular Pay Phone, Inc.

234 West Willow Street
Chicago, IL 60614
(312) 664-2100

CEO: Martin Cooper, Chairman
Subsidiary of: Dyna, Inc.
Founded: 1986

Employees: 6 (11/86)
Revenue (FYE 12/31/86): \$250,000*

The Company: Cellular Pay Phone, Inc. provides turnkey systems to cellular phone companies

Sources of Revenue:

- Turnkey Systems (100%)

Key Products and Services:

- Turnkey Systems (Utilizes IBM PC/ATs)
 - Cellular Pay Phone, Inc. provides a cellular phone credit card billing system. The system provides call logging and direct billing to individual credit card accounts.

Target Industries:

- Telecommunications (100%)

Geographic Markets:

- U.S. (100%)

*INPUT estimate

October 1986



COMPANY PROFILE

CENTEL FEDERAL SYSTEMS, INC.

11400 Commerce Park Drive
Reston, VA 22091
(703) 758-7000

Peter P. Kusek, President and CEO
Private Corporation
Total Employees: 350
Total Revenue, Fiscal Year End
12/31/90: \$131,000,000

The Company

Centel Federal Systems, Inc. is a systems integration and professional services firm providing information systems and network solutions for the federal government and commercial sectors. Over the past twenty years, the company has implemented numerous large, complex federal government systems.

Centel Federal Systems previously operated as a unit of Centel Corporation within Centel's Business Systems segment.

- In March 1990, CFSI Holdings Corporation was formed by Centel Federal Systems management to acquire Centel Federal Systems from Centel Corporation.
- Centel Federal Systems' management currently owns a majority interest in Centel Federal Systems, with Moore Business Forms and Centel Corporation as minority investors.

Centel Federal Systems' 1990 revenue reached an estimated \$131 million. The company has achieved a 331% growth rate over the past five years.

Key Products and Services

Approximately 80% of Centel Federal Systems' 1990 revenue was derived from systems integration and 20% from professional services.

Centel Federal Systems offers a range of products and services to support large, complex computer and telecommunications programs.

- The company has experience with all facets of program requirements, including design, engineering/development, procurement, testing, integration, program management, installation, implementation, operations, maintenance, training, and customer support of complex systems.

- The company offers special technical expertise in the areas of communications networks (including FTS2000), data base management, operating systems, optical digital imaging, electronic records management, workstations, multiuser systems, fault-tolerant systems, custom application software, forms automation, systems integration, computer-based training, and secure systems.

Examples of systems designed and implemented by Centel Federal Systems include the following:

- Providing the U.S. Postal Service with a high-capacity, computer-based, fault-tolerant change-of-address mail forwarding system known as CFS II.
- Implementing a nationwide computer-based office automation and automated training system for the Internal Revenue Service.
- Providing the General Services Administration (GSA) technical assistance and management services (TAMS) to assist GSA's oversight of FTS2000, a multibillion dollar project to modernize the federal government's telecommunications networks.

In addition to Centel Federal's core businesses, the company also offers information security products and automated forms integration services.

- The company provides off-the-shelf and custom-designed security solutions for system protection, data protection, and overall security support.
- The ASSURE family of security products includes PC/Assure, for standalone, portable and laptop PCs; Net/Assure, for LANs/WANs; and Tel/Assure, for secure telecommunications.
- Centel Federal specializes in automating and integrating forms within an enterprise. Forms automation provides solutions to forms processes requiring repetitive and sequential handling, computation, duplication of common information on multiple forms, and assurance that the most recent version of the form is being used.

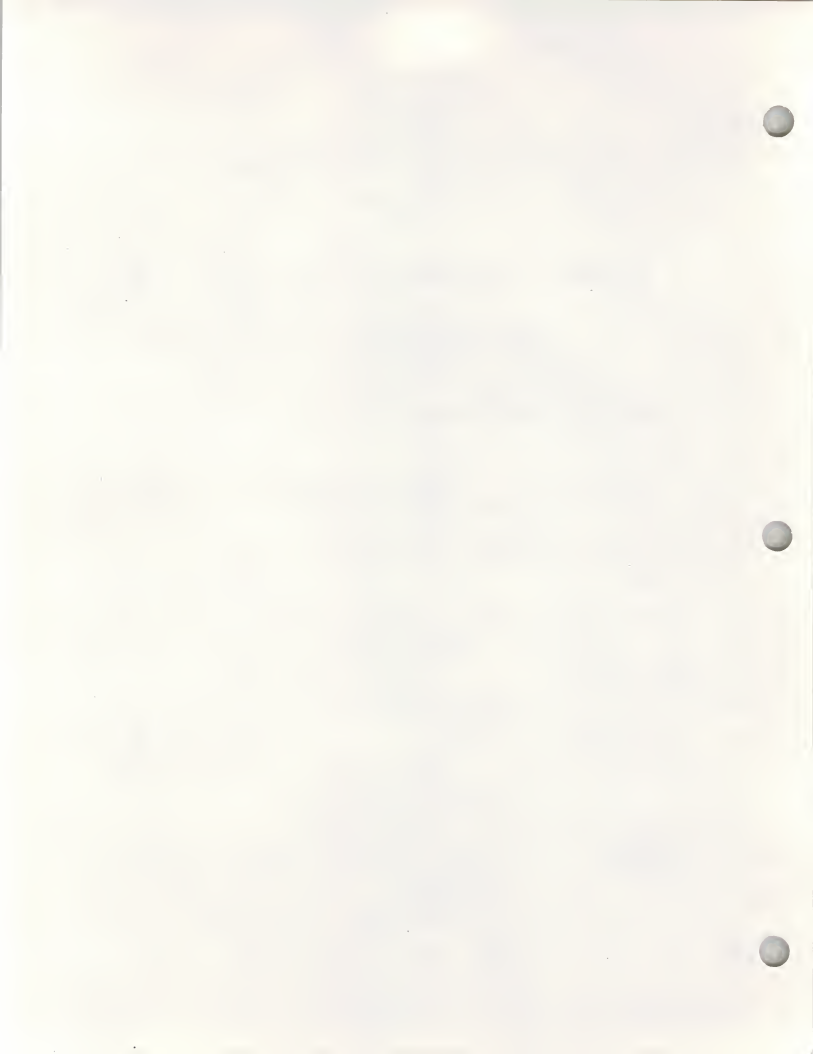
Industry Markets

Ninety-five percent of Centel Federal Systems' revenue is derived from the federal government. The remainder is derived from commercial sources.

**Geographic
Markets**

One hundred percent of the company's revenue is derived from the U.S.

In addition to its headquarters in Reston (VA), Centel Federal Systems has employees located at various client sites.



COMPANY PROFILE

CENTEL FEDERAL SYSTEMS, INC.

11400 Commerce Park Drive
Reston, VA 22091
(703) 758-7000

Peter P. Kusek, President
Operating Unit of Centel Corporation
Total Employees: 400
Total Revenue, Fiscal Year End
12/31/89: \$110,000,000

The Company

Centel Federal Systems, Inc. provides systems integration and professional services to the federal government.

- Early in 1988, Centel Federal Systems was separated from Centel Information Services into a distinct operating unit to more effectively address the computer systems and services marketplace in the government sector.
- Centel Federal Systems currently operates within Centel Corporation's Business Systems segment, which also includes Communications Systems and Information Systems.
- During 1988, Centel management announced its intention to sell its Business Systems operations. The company has not yet made any formal announcements concerning prospective buyers.

Centel Federal Systems' 1989 revenue reached an estimated \$110 million, a 50% increase over 1988 revenue of approximately \$55 million. The company anticipates that growth during 1990 will continue at present levels.

Key Products and Services

One hundred percent of Centel Federal Systems' revenue is derived from systems integration and associated services provided to the federal government.

Centel Federal Systems provides integrated services, including system design, software and hardware procurement and support, and system management, to various federal government units. Contract examples include the following:

- A multiyear General Services Administration contract with an anticipated value of \$29 million to provide technical assistance and management services to oversee AT&T's and Sprint's

implementation of FTS2000, a multibillion dollar project to modernize the federal government's phone network

- Providing office automation support to the Internal Revenue Service (IRS)
- Providing computer-based training systems to the IRS
- Providing Tempest equipment to various secure agencies
- Various services for the U.S. Postal Service

Industry Markets

One hundred percent of Centel Federal Systems' revenue is derived from the federal government.

Geographic Markets

One hundred percent of the company's revenue is derived from the U.S.

In addition to its headquarters in Reston (VA), Centel Federal Systems has employees located at various client sites.

COMPANY PROFILE

CENTRAL POINT SOFTWARE, INC.

15220 N.W. Greenbrier Parkway
Beaverton, OR 97006
(503) 690-8088

Charles M. Boesenberg, Chairman,
President, and CEO
Public Corporation, NASDAQ
Total Employees: 357 (3/92)
Total Revenue, Fiscal Year End
3/31/92: \$83,691,000

The Company

Central Point Software, Inc., founded in 1982, develops, markets, and supports utility software for IBM PCs and compatibles and Macintosh personal computers. The company's premier product, *PC Tools*, was introduced in 1985.

- The products provide hard disk backup, disk diagnostics and recovery, file management, disk optimization, disk caching, remote computing, personal information management, and virus detection, removal, and prevention.
- Central Point's products are designed for a range of PC users, from highly technical users to corporate, small business, and home users who may have limited technical expertise.

Central Point's strategy is provide utility products that are easy to use, offer a high degree of functionality at attractive prices, and feature common user interfaces. Key elements of this strategy include:

- Broadening its customer base by marketing to PC users with a range of requirements and technical expertise
- Leveraging core technology
- Focusing on popular operating environments
- Strategic acquisitions of products and technologies
- Marketing to its worldwide installed base
- Expanding distribution channels
- Increasing its international sales focus

During fiscal 1991 and 1992, Central Point entered into over 30 agreements by which technology or product rights were licensed or purchased. Many of these agreements involved the acquisition of development-stage technology. In the past, Central Point was unable to incorporate certain acquired technologies into its products. During fiscal 1992, the company charged off approximately \$2.2 million to reflect the reduction in the net realizable value of certain products and product rights acquired during 1991 and 1990.

In March 1992, Central Point acquired Eikon Systems, Inc. of Foster City (CA) for 550,000 shares of Central Point common stock valued at approximately \$4.7 million.

- Eikon develops, designs, and markets systems and utility software, primarily for the Windows operating environment.
- Eikon had revenue of about \$2.8 million and net income of \$212,000 for calendar 1991. Approximately \$1.8 million (65% of revenue) was derived from contract services and license fees from Central Point.

In March 1992, Central Point made an initial public offering of 3.0 million shares of common stock, of which 2.0 million were sold by the company and the remainder by selling stockholders. Estimated net proceeds to the company are \$21.8 million.

Central Point's fiscal 1992 revenue reached \$83.7 million, a 56% increase over fiscal 1991 revenue of \$53.8 million. Net income declined from \$8.2 million in fiscal 1991 to \$1.1 million in fiscal 1992. A five-year financial summary follows:

**CENTRAL POINT SOFTWARE, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	3/92	3/91	3/90	3/89	3/88
Revenue	\$83.7	\$53.8	\$26.1	\$18.4	\$18.6
• Percent increase (decrease) from previous year	56%	106%	42%	(1%)	N/A
Income before taxes	\$3.4	\$12.5	\$7.2	\$4.5	\$4.2
• Percent increase (decrease) from previous year	(73%)	73%	60%	7%	N/A
Net income	\$1.1	\$8.2	\$4.3	\$2.7	\$3.3
• Percent increase (decrease) from previous year	(86%)	90%	60%	(19%)	N/A
Earnings per share	\$0.05	\$0.35	\$0.21	\$0.14	\$0.17
• Percent increase (decrease) from previous year	(86%)	67%	50%	(18%)	N/A

- (a) Includes write-offs of \$2.2 million associated with certain products and product rights acquired in fiscal 1991 and 1990 and \$3.0 million associated with the acquisition of Eikon.

Central Point management attributes fiscal 1992 results to the following:

- Revenue growth was attributed to the introduction of new products and upgrades, an increase in the number of units sold, and increases in average selling prices.
- International sales rose 49%, due in part to the establishment of sales and marketing subsidiaries in the U.K. in 1990 and in Germany and France in 1991.
- Pretax income decreased primarily due to a write-off of acquired research and development of approximately \$3.0 million incurred in connection with the acquisition of Eikon, costs of approximately \$2.7 million relating to the development and shipment of the *PC Tools 7.1* maintenance release and associated inventory obsolescence, and costs of \$2.2 million to reflect a reduction in the net realizable value of certain products and product rights acquired in fiscal 1990 and 1991.

- Product development expenses were \$13.6 million (16% of revenue) in fiscal 1992, \$6.5 million (12% of revenue) in fiscal 1991, and \$2.3 million (9% of revenue) in fiscal 1990.

As of March 31, 1992, Central Point had 357 full-time employees worldwide, segmented as follows:

Sales and marketing	90
Support and customer service	79
Product development	99
Manufacturing	56
Finance and administration	<u>33</u>
	357

Competitors include Symantec Corporation and Fifth Generation Systems.

Key Products and Services

One hundred percent of Central Point's revenue is derived from its utility software products. To date, more than 90% of the company's revenues have been derived from DOS-compatible products.

- Sales of *PC Tools* products accounted for approximately 74%, 86%, and 78% of Central Point's total revenues for fiscal 1992, 1991, and 1990, respectively.
- Sales of anti-virus products accounted for about 18% of revenues in fiscal 1992.
- The company currently has an installed base of over one million registered users.

PC Tools is an integrated set of utilities that incorporates tools for hard disk backup, disk diagnosis and recovery, file management, disk optimization, disk caching, and personal information management for DOS and Windows environments.

- *PC Tools 7.1*, the current version of *PC Tools*, offers extensive Windows and LAN support and more than 20 major utility functions.
- The current retail list price for *PC Tools* is \$179.

Central Point MacTools is a data protection utility for the Macintosh. Its current list price is \$149.

Central Point Anti-Virus and *Central Point Anti-Virus for Windows* offered advanced versions of the PC virus detection capability that is included in *PC Tools*, as well as the removal and prevention capabilities, for DOS Windows and LAN environments.

- *Central Point Anti-Virus for Windows* was introduced in March 1992 and supports Windows version 3.1.
- The retail list price for each product is \$129.
- Central Point also offers a Virus Protection Service Plan that is designed to address new viruses as they are discovered.

Central Point Backup, introduced in October 1990, and *Central Point Backup for Windows*, introduced in March 1992, provide the hard disk backup function sold in *PC Tools*. The current retail list price for each product is \$129.

Central Point Commute, introduced in May 1991, is an advanced version of the remote-computing utility in *PC Tools*. The retail list price is \$129.

Central Point Scrapbook+ for Windows, introduced in March 1992, is a visual data storage and retrieval utility that enables users to quickly store, locate, view, and retrieve images of pictures, text, charts, and other graphics. The product retails for \$120.

Copy II PC and *Copy II Plus* allow users of DOS and Apple II PCs to create archival backups of most copy-protected software. The retail list price for each product is \$39.95.

Deluxe Option Board, a half-size card for IBM PCs and compatibles, permits users to read and write Macintosh disks using the computer's internal 3.5-inch disk drive.

Central Point provides customer service and technical support through a dedicated telephone staff, an automated telephone order entry system, facsimile, mail, and CompuServe's bulletin board.

- International customer service and technical support, administered in the U.K., includes a toll-free, multilingual telephone hotline covering the majority of European countries.
- Central Point provides a 60-day, money-back guarantee on all of its products.

Industry Markets

Central Point's products are designed for a range of PC users, from highly technical users to corporate, small business, and home users who may have limited technical expertise.

To date, the company's products have been sold primarily through distributors. Over the past several years, Central Point has implemented strategies designed to increase sales to domestic corporate and government resellers, OEMs, and VARs, and to international markets. The company also sells products directly to registered users. Similar distribution strategies are pursued internationally.

Central Point currently sells its products through distributors, including Merisel, Ingram Micro, and Computer 2000.

- In fiscal 1992, sales to Ingram Micro represented approximately 10% of total revenue and sales to Merisel represented about 13% of total revenue.
- In fiscal 1991, sales to Ingram Micro contributed 13% to total revenue and sales to Computer 2000 represented 10% of total revenue.

Central Point also sells its products directly to selected software specialty chains such as Egghead, Software Etc. Stores, and Babbages; computer superstores such as CompUSA, Computer City, and CompuAdd; and mail order outlets such as PC Connection.

Central Point has entered into agreements with several Fortune 500 companies for site licenses as well as a number of corporate and government resellers, including Egghead, Corporate Software, Software Spectrum, Softmart, 800-Software, Government Technology Services, and CompuAdd.

OEM clients include GCC Corporation, Iomega Corporation, Storage Dimensions, Summit Memory Systems, and WangTek.

Geographic Markets

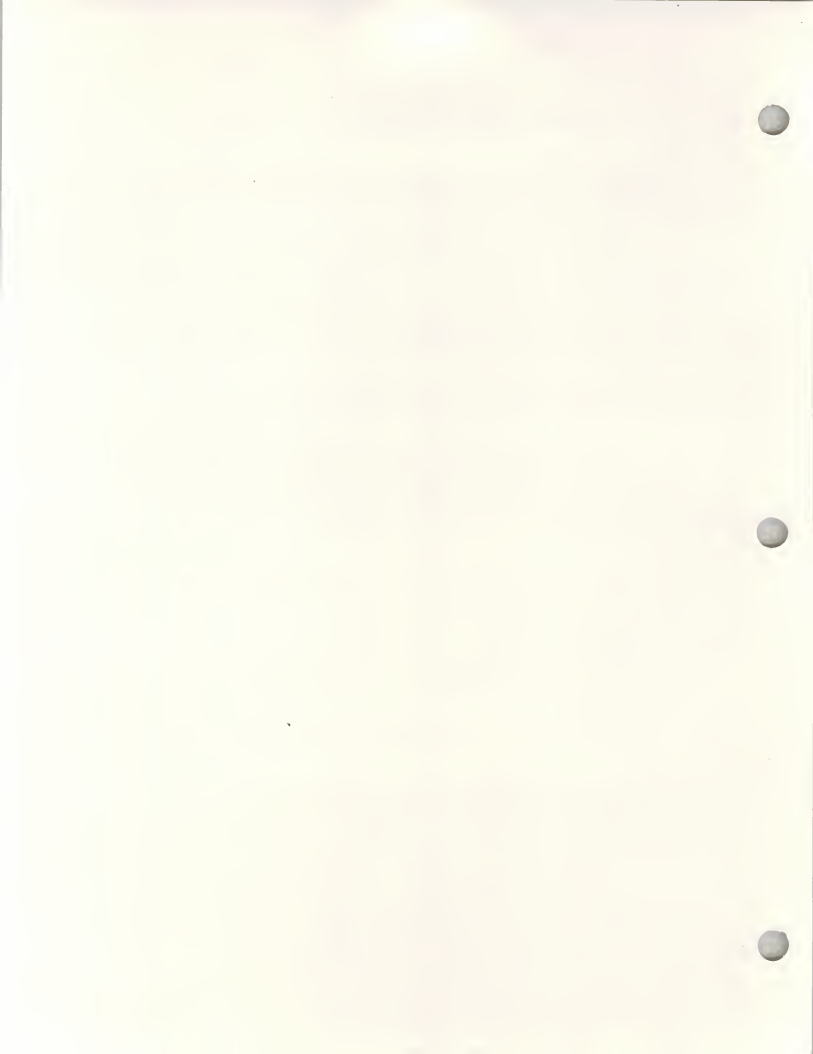
Approximately 72% of Central Point's fiscal 1992 revenue was derived from North America and 28% from international sources. A three-year geographic source of revenue summary follows:

CENTRAL POINT SOFTWARE, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	3/92		3/91		3/90	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
North America	\$63.9	72%	\$40.5	75%	\$19.9	76%
International	19.8	28%	13.3	25%	6.2	24%
TOTAL	\$83.7	100%	\$53.8	100%	\$26.1	100%

U.S. offices are in Beaverton (OR) and Foster City (CA).

Sales outside of the U.S. and Canada are being made through about 30 international distributors, primarily in the U.K. and Western Europe. International distributors sell to retailers and directly to end users. Central Point also has offices in the U.K., France, and Germany to support international sales.



COMPANY BRIEF

Cross Industry: Systems Software

Century Analysis, Inc.

114 Center Avenue
Pacheco, CA 94553
(415) 680-7800

CEO: Sarah LaFrance, President
Private Company
Founded: 1976

Employees: 42 (12/86)
Revenue (FYE 12/31/86): \$5-10 million

The Company: Markets and supports mainframe access, departmental processing, and application development systems software products

Sources of Revenue:

- System Software (100%)

Key Products:

- System Software Products (Utilizes CDC CYBER, DEC VAX, NCR mainframes, and UNIX-based processors)
 - Teleprocessing monitor (BOSS/3)
 - Communications processor software (OSI)
 - Relational data base management system (PLUS/4)
 - Data handling interface (MULTI-BASE/9)

Target Industries:

- Cross industry (100%)

Geographic Markets:

- U.S. (85%)
- Non-U.S. (15%)
- Sales Offices: Pacheco (CA), Dayton (OH), Philadelphia (PA), and Decatur (IL)
- Non-U.S. sales are through distributors

December 1986



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1995

Ceridian Corporation

Chairman,
President & CEO: Lawrence Perlman
8100 34th Avenue South
Minneapolis, MN 55425
Phone: (612) 853-8100
Fax: (612) 853-5300

Status:	Public
Employees:	7,500 (12/94)
Revenue:	\$ 916,300,000
Fiscal Year End:	12/31/94

Key Points

- Ceridian Corporation, known as Control Data Corporation until June 1992, has been significantly reshaped through divesting or discontinuing various business units and by narrowing and reorienting the focus of certain of its continuing operations.
- As a result of these reshaping efforts, Ceridian is now comprised of two business segments—Information Services (Employer Services and Arbitron) and Defense Electronics (Computing Devices International)—and operates

with approximately one-fourth the revenue, assets and employees employed five years ago.

- Ceridian continues to invest in technology, acquisitions and process improvements to enhance operating performance and revenue growth in each of its businesses.
- Within Employer Services, Ceridian began a rearchitecture of the payroll processing system, acquired a highly automated tax filing system through the purchase of Systems Tax Service, Inc. and expanded its sales force. In December 1994, Ceridian expanded its tax filing customer base with the acquisition of Payroll Tax Management, Inc.
- During mid-1994, Ceridian acquired Tesseract Corporation, a provider of integrated payroll, human resource and benefits administration systems. Tesseract's payroll software will be the

core of Employer Services' new payroll system and will add an in-house payroll processing option for high-end customers, as well as benefits, claims, investment and retirement plan management applications.

- In early 1995, Ceridian announced a series of agreements with IBM ISSC under which ISSC will provide centralized payroll processing services for Employer Services as part of Ceridian's program to consolidate payroll processing from a district to a centralized level. ISSC and Employer Services will also remarket certain of each other's products and services.
- Most recent discontinued operations included the Arbitron's unprofitable syndicated television and cable ratings service (December 1993) and the TeleMoney Services transaction services business (May 1994).

Company Description

Ceridian Corporation provides a range of products and services through two business segments—Information Services and Defense Electronics.

- The Information Services segment currently includes the following operations:
 - Ceridian Employer Services provides payroll processing, tax filing, human resources information management software, consulting services and employee assistance programs to more than 20,000 customers in a range of industries and markets.
 - The Arbitron Company provides radio audience measurement information and media and marketing information to broadcasters, advertising agencies and advertisers. During 1994, Arbitron created a NewMedia unit to explore business opportunities in the cable, telecommunications, direct broadcast satellite, on-line and related markets.

- The Defense Electronics segment currently consists of the following businesses:

- Computing Devices International develops, manufactures and markets electronic systems, subsystems and components and provides systems integration and other services primarily to government defense agencies.
- Business Information Services is a small unit within Computing Devices that provides custom data processing applications for customers (primarily the U.S. government) and delivers them via its timesharing network. Prior to January 1, 1994, this unit reported to Information Services.

Company Strategy

Employer Services' strategy is to improve its operating margins and revenue growth by:

- *Investing in Technology*—Employer Services' existing payroll processing and payroll tax filing processes incorporated older technology, requiring significant manual processing and labor intensive installation.
 - In the second quarter of 1993, Employer Services began a multiyear project to redesign its payroll processing system to be more highly automated, easier to install and maintain and with greater flexibility.
 - The acquisition of Systems Tax Service in 1993 provided Employer Services with a more highly automated tax filing system and has replaced Employer Services' tax filing processing operations in Baltimore.
 - By transferring the newly acquired payroll technology of Tesseract into Employer Services' data center environment, Ceridian expects to speed up the development cycle of its new product/service offerings. Ceridian plans to introduce a client/server human resource (HR) system for large customers in late 1995. A

Windows-based version of Employer Services' HR software is expected to be available to midsized customers in early 1995.

- Other actions to improve Employer Services' technology and automation included the December 1992 acquisition of the software applications division of Revelation Technologies. The company also completed the conversion of Employer Services' printing operations from impact printers to laser printers in 1992, eliminating the need to carry stock and forms.
- *Consolidating Operations*—In conjunction with the development of a new payroll system, Employer Services plans to consolidate its district payroll processing centers, as evidenced by the services agreement formed with IBM ISSC in early 1995. The company has created a national telephone service support center to provide a single point of contact for customer inquiries and continuing local district support.
- *Increasing Productivity and Size of Sales Force*—Employer Services intends to orient its sales force more toward medium and large employers that tend to purchase a greater variety of services.
- *Expanding Human Resource Offerings*—Employer Services' goal is to identify the overall human resource information management needs arising out of the employment relationship and address those needs through a range of services, including outsourcing, software applications and consulting.
- *Making Strategic Acquisitions*—Employer Services intends to seek additional strategic acquisitions that would allow it either to increase its market penetration, improve its technology or provide additional products.

Arbitron's primary strategy is to maintain its competitive position, increase its revenue and strengthen its profitability by:

- *Enhancing Radio Audience Measurement*—Arbitron intends to enhance its radio audience measurement service so as to increase the value of the service to customers and maintain a leading market share.
 - *Introducing Qualitative Services*—Arbitron is test marketing a new, locally oriented qualitative audience research service whose goal is to provide a profile of the broadcast audience in terms of local media, retail and consumer preferences so that local broadcasters will have information to help develop targeted sales and programming strategies to attract a larger share of the marketing dollars spent by local advertisers.
 - *Using Cooperative Arrangements*—Arbitron intends to further develop its capabilities and technologies through alliances and licensing agreements that will enable it to gather, analyze and integrate broadcasting, product purchasing and advertising data from various sources and provide the information and systems that broadcasters, advertising agencies and advertisers require to market their products more effectively.
- Computing Devices' strategy is to improve its competitive position and operating margins by:
- *Reducing Operating Costs*—In light of decreases in defense spending, over-capacity among defense contractors and increased price sensitivity from its government customers, Computing Devices believes its future success will depend in large measure on becoming a low cost provider of products and services. Toward this end, the company intends to reduce overhead and increase productivity through consolidating operations, increasing the level of automation in its product and development facilities and providing increased employee training.
 - *Focusing in Areas of Expertise*—Computing Devices intends to continue to pursue tactical (as opposed to strategic) defense programs and will use technology developed through both internal

and contract research and development. The company believes that spending on tactical systems will not be reduced to the same extent as spending on strategic systems and that greater emphasis will be placed on weapons sophistication, electronics, surveillance and intelligence.

- **Emphasizing Existing Geographic Markets**—Computing Devices intends to continue to emphasize specific segments of the North American and U.K. defense electronics markets where it believes significant opportunities exist, including opportunities to upgrade, enhance and retrofit existing military equipment.
- **Leveraging Existing Products for New Applications**—Computing Devices intends to adapt

existing products and services in response to business opportunities in other worldwide defense markets and in civilian and civil government markets. The company may establish cooperative arrangements with other companies where their expertise or familiarity with other markets would prove beneficial.

Financials

Ceridian's 1994 revenue reached \$916.3 million, a 3% increase over 1993 revenue of \$886.1 million. Net income reached \$78.6 million, compared to a net loss of \$30.4 million for 1993. A four-year financial summary follows:

Ceridian Corporation Four-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year			
	1994	1993	1992	1991
Revenue	\$916.3	\$886.1	\$830.3	\$763.0
• Percent change from previous year	3%	7%	9%	N/A
Income (loss) before taxes	\$85.2	\$(18.2) (a)	\$(24.0) (a)	\$70.2 (a)
Earnings (loss) from continuing operations	\$78.6	\$(22.0)	\$(29.1)	\$66.1
Net income (loss)	\$78.6	\$(30.4) (b)(c)	\$(392.5) (c)(d)	\$(9.8) (b)(c)
Earnings (loss) per share from continuing operations	\$1.43	\$(0.52)	\$(0.69)	\$1.54
Net earnings (loss) per share	\$1.43	\$(0.71) (b)(c)	\$(9.22) (c)(d)	\$(0.24) (b)(c)

(a) Includes restructuring losses (gains) of \$67.0 million in 1993, \$76.2 million in 1992 and \$(16.2 million) in 1991.

(b) Includes extraordinary losses of \$8.4 million (\$0.19 per share) in 1993 and \$1.2 million (\$0.03 per share) in 1991, both due to early retirement of debt.

(c) Includes losses from discontinued operations of \$321.6 million (\$7.55 per share) in 1992 and \$74.7 million (\$1.75 per share) in 1991.

(d) Includes a \$41.8 million (\$0.98 per share) charge for a change in the method of accounting for postretirement health care benefits.

Results from continuing operations for 1993 included a fourth quarter net restructuring loss of \$67.0 million, which included \$75.9 million in restructuring charges for Information Services, \$5.5 million in charges for Computing Devices, partially offset by a net gain of \$14.4 million related to a tax refund.

- Information Services' charges included \$57.0 million resulting from the October 1993 decision to discontinue Arbitron's syndicated television and cable ratings service and \$18.9 million in charges related to consolidating Employer Services' payroll processing activities and centralizing customer service operations.
- The restructuring charges recorded by Computing Devices in the fourth quarter of 1993 related to actions taken to reduce employment levels in the U.S. and U.K. consistent with its objectives to reduce overhead.

A public offering of \$236 million of preferred stock in late 1993 enabled Ceridian to repay approximately 90% of its debt.

Revenue Analysis by Product/Service

A three-year financial summary by operating unit appears on the following page. Financials prior to 1994 have been restated to reflect the transfer of responsibility for Ceridian's Business Information Services operation from Information Services to Computing Devices effective January 1, 1994.

Employer Services experienced a 30% increase in revenue during 1994. More than half of the growth was attributed to acquisitions, most significantly the October 1993 acquisition of Systems Tax Service tax filing business and the June 1994 acquisition of Tesseract Corporation.

- Apart from acquisitions, Employer Services' revenue increased approximately 14% from 1993 to 1994, primarily reflecting increased payroll

processing revenue, due largely to new customer installations and an increased year-end 1993 retention rate for existing customers. The growth was also due to increased revenue from payroll tax filing fees and investment income due largely to higher percent of Employer Services' payroll processing customers also using its tax filing service.

- Employer Services' revenue growth is expected to be between 15% and 20% in 1995.

Arbitron's revenue declined 30% during 1994 was due primarily to the discontinuance of its television ratings service, which had provided \$44.9 million of revenue during 1993.

- Also contributing to the decrease was the year-end 1993 transfer of most of Arbitron's commercial monitoring revenue to its Competitive Media Reporting (CMR) joint venture with VNU Business Information Services. This transfer, which reduced Arbitron's 1994 revenue by \$13.8 million, resulted from an agreement to shift marketing and sales responsibility for commercial monitoring services provided to larger advertising agencies from Arbitron to CMR.
- Partially offsetting this decrease was a revenue increase of approximately 7% in 1994 in the other aspects of Arbitron's business.
- Ceridian expects the continued moderate revenue growth in 1995 in Arbitron's radio ratings business will be augmented by revenue from:
 - The exchange of its interest in the CMR joint venture for an interest in VNU's Scarborough Research Corporation subsidiary, which produces the *Scarborough Report*
 - The acquisition of MediaMaps International, a provider of a proprietary marketing analysis system

Ceridian Corporation
Three-Year Financial Summary by Operating Unit
(\$ Millions)

Operating Unit	Fiscal Year					
	1994		1993		1992	
	\$	Percent of Total	\$	Percent of Total	\$	Percent of Total
Revenue						
Information Services Segment						
- Employer Services	\$303.3	33%	\$232.6	26%	\$209.9	25%
- Arbitron	121.3	13%	172.2	20%	178.3	21%
- Other services (a)	5.4	1%	20.0	2%	20.5	2%
	\$430.0	47%	\$424.8	48%	\$408.7	48%
Defense Electronics Segment						
- Computing Devices International (b)	\$486.3	53%	\$461.3	52%	\$412.4	51%
Other (c)	--	--	--	--	\$9.2	1%
Total Revenue	\$916.3	100%	\$886.1	100%	\$830.3	100%
Earnings (loss) before interest and taxes						
Information Services (d)	\$58.6	77%	\$(39.0)	N/A	\$2.5	N/A
Defense Electronics (e)	30.6	40%	21.5	N/A	19.7	N/A
Other (f)	--	(17%)	7.4	N/A	(47.7)	N/A
Total Earnings (loss)	\$76.2	100%	\$(10.1)	--	\$(25.5)	--

(a) Primarily includes revenue from TeleMoney Services and related network services which were sold in 1994.

(b) Includes the operations of Business Information Services (transferred from Information Services).

(c) Includes revenue from the Benefits Services division of Employer Services, which was sold during 1992.

(d) Includes restructuring losses of \$75.9 million in 1993 and \$30.9 million in 1992.

(e) Includes restructuring losses of \$5.5 million in 1993, \$1.1 million in 1992 and \$1.3 million in 1991.

(f) Includes gains of \$14.4 million in 1993 and restructuring losses of \$44.2 million in 1992.

Computing Devices' revenue increased more than 5% during 1994.

- Constraining the revenue increase were the near completion at year-end 1993 of a contract to manufacture equipment for Control Data Systems and the July 1993 sale of the Barrios Technology systems integration subsidiary, activities which

together provided \$29.6 million more revenue in 1993 than in 1994.

- Apart from these items, Computing Devices' 1994 revenue increased nearly 13% over 1993. About 90% of the increase was due to a \$49.9 million increase in revenue from the Iris contract to provide a communications system to the Canadian defense department.

- Computing Devices' ongoing U.S. operations also reported an increase in revenue of nearly 7% from 1993 to 1994.

Interim Results

Revenue for the three months ending March 31, 1995 reached \$257.8 million, a 16% increase over \$221.3 million for the same period in 1994. Net earnings reached \$28.4 million, a 28% increase over \$22.2 million for the same period a year ago.

- Revenue from Employer Services was \$100.4 million, compared to \$77.5 million for the prior year's period.
- Revenue from Arbitron was \$28.2 million, compared to \$28.3 million for the same period in 1994.
- Revenue from Computing Devices was \$129.2 million, compared to \$110.9 million for the same period a year ago.
- Net earnings increased due to improvements in gross margins for both the Information Services and Defense Electronics segments.

Market Financials

Approximately 52% of Ceridian's 1994 revenue was derived from various government entities (domestic and foreign), 33% from various employers/businesses, 13% from the media and the remainder from banks and merchants.

Revenue from sales under prime contracts or subcontracts to the U.S. government were \$226 million (25% of revenue) in 1994, \$232 million (26% of revenue) in 1993 and \$239 million (29% of revenue) in 1992, substantially all of which are reported in the Defense Electronics business segment.

Revenue from sales to the Canadian government were approximately \$173 million (19% of revenue) in 1994, \$137 million (15% of revenue) in 1993 and \$95 million (11% of revenue) in 1992, substantially all of which are reported in the Defense Electronics business segment. Of the sales to the Canadian government, \$154 million in 1994, \$105 million in 1993 and \$69 million in 1992 were from the Iris contract.

Geographic Markets

Approximately 72% of Ceridian's 1994 revenue was derived from the U.S. and 28% from international sources.

Virtually 100% of international sales were attributed to Computing Devices International's defense electronics operations primarily in Canada and the U.K.

A three-year summary of geographic sources of revenue appears on the following page.

Ceridian Corporation
Three-Year Source of Revenue Summary
 (\$ Millions)

Geographic Market	Fiscal Year					
	1994		1993		1992	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$658.2	72%	\$670.2	76%	\$663.5	80%
International	258.1	28%	215.9	24%	166.8	20%
Total	\$916.3	100%	\$886.1	100%	\$830.3	100%

Acquisitions

In December 1994, Ceridian purchased the assets of two companies—Human Effectiveness Inc. (HEI), a Chicago-based employee assistance provider and Payroll Tax Management, Inc. (PTM), a payroll tax filing operation based in Glendale (CA)—in order to build Ceridian Employer Services' customer base.

- The HEI transaction expands the presence of Ceridian Employer Services' EAR employee assistance program in several major regional markets. HEI generated approximately \$1 million in revenue in 1994.
- PTM's tax filing customers will be transitioned to Ceridian's Employer Services' Systems Tax Service unit. PTM had revenue of \$3.8 million in fiscal 1994.

In December 1994, Ceridian acquired the assets of MediaMaps International (known known as Media Marketing Technologies) which provides Arbitron with a proprietary integrated database marketing system for radio station marketing and promotion that creates block group-coded databases of radio listeners and provides segmentation analyses and map displays of key listener segments.

In December 1994, Computing Devices complemented its imaging capabilities through the

acquisition of Paragon Imaging, Inc., a provider of imaging software to U.S. defense department intelligence agencies and service commands, which emphasizes commercial off-the-shelf technology. Paragon had 1994 revenue of \$4.2 million.

On October 31, 1994, Ceridian acquired User Technology Services, Inc. (UserTech), a Connecticut-based provider of training services.

- UserTech, with 62 employees and revenue of approximately \$4.4 million for the fiscal year ending October 31, 1994, provides services that help customers' employees acquire the expertise they need to maximize the value of new information systems. It also provides communications to employees to introduce new technology, education and training, user procedures and workflow documentation and on-line performance support.
- UserTech operates throughout the U.S. from offices in Connecticut, Georgia, Illinois and New Jersey.
- UserTech operates as a wholly owned subsidiary of Ceridian within Employer Services.

In June 1994, Ceridian acquired Tesseract Corporation of San Francisco for approximately \$60 million.

- Tesseract, with approximately 200 employees and 1993 revenue of \$28.9 million, provides advanced, integrated payroll, human resource and benefits administration software products and professional services for IBM cooperative environments, supporting mainframe, client/server and distributed platforms.
- Tesseract serves more than 150 customers ranging in size from 1,000 to 500,000 employees.
- Tesseract operates as a wholly owned subsidiary of Ceridian within Employer Services.

In October 1993, Ceridian purchased Systems Tax Service, Inc. (STS) of Fountain Valley (CA) for approximately one million shares of Ceridian common stock.

- STS, with 1993 revenue of about \$18.5 million, is a payroll tax filing processor with a highly automated tax filing system.
- The operations of STS have been merged into Employer Services.

Investments

In January 1995, Ceridian obtained a minority equity investment in Key Idea Development, LLC, which is developing a lightweight, voice-activated wearable computer. In connection with the investment, Ceridian obtained an exclusive license to develop military applications for this computer.

In December 1994, Ceridian exchanged its interest in the Competitive Media Reporting (CMR) joint venture with VNU Business Information Services, Inc. for an interest in the business of VNU's Scarborough Research Corporation subsidiary which produces the *Scarborough Report* that provides qualitative information regarding product/service usage and media usage in 58 major U.S. markets. Arbitron has the exclusive right to market the *Scarborough Report* to radio broadcasters and cable systems.

In the second quarter of 1994, Arbitron obtained a minority equity interest in Adcom Information Services, Inc., which is developing hardware and software technology to provide electronic measurement systems to the cable industry.

Divestitures

Ceridian's results over the past five years have been significantly affected by the performance and subsequent sale, spin-off or closing of a number of its businesses. Recent divestitures include the following:

- In May 1994, Ceridian sold its TeleMoney Services unit and related network and computer center operations to First Data Resources, Inc. and received net cash proceeds of \$24.3 million.
 - TeleMoney Services provides network-based transaction services, credit and debit card authorization and check verification primarily to banks and merchants.
 - TeleMoney generated about \$20 million in revenue during 1993.
- Effective December 1993, Ceridian discontinued Arbitron's syndicated television and cable rating service and terminated about 700 employees. Through this service, Arbitron had provided local market television and cable audience measurement information gathered electronically and through written diaries. This service provided approximately 26% (\$44.8 million) of Arbitron's 1993 revenue.
- In past years, Ceridian invested in limited partnerships formed to construct and operate Business and Technology Centers (BTCs). In February 1994, Ceridian disposed of its interest in the remaining five partnerships, as well as the remaining BTC it owned.

Employees

As of December 31, 1994, Ceridian had approximately 7,500 full-time and part-time

employees. The company currently has approximately 7,400 full-time employees, segmented as follows:

Employer Services.....	3,300
Arbitron	900
Computing Devices Int'l.	3,100
Corporate and other	<u>100</u>
	7,400

Key Products and Services

Ceridian provides a range of processing services, applications software products and integration services through the following business units:

Ceridian Employer Services

Employer Services offers a range of payroll processing, payroll tax filing, human resource information systems, consulting services and employee assistance programs. During 1994, more than 82% of Employer Services' revenue was derived from payroll processing and payroll tax filing services.

Payroll processing consists primarily of preparing and furnishing employee payroll checks, direct deposit advices and supporting journals, summaries and other reports.

- Payroll processing is currently conducted at district offices located throughout the U.S., all of which are linked in a nationwide network.
- Employer Services' payroll processing system allows customers to input their own payroll data via PCs, transmit the data on-line to Employer Services for processing, retrieve reports and data files from Employer Services and print reports and, in certain instances, payroll checks or direct deposit advices on-site.
- Customers can also input payroll data by telephone or batch transmittal, with payroll checks and related reports prepared by Employer Services at one of its district processing centers.

- Employer Services' payroll system also interfaces with both customer and third-party transaction processing systems to facilitate services such as direct deposit of payroll checks.
- Through its Minidata Services, Inc. subsidiary, Employer Services provides payroll services to customers in the mid-Atlantic states with fewer than 100 employees.
- Tesseract services more than 130 customers with more than 5,000 employees.

Payroll tax filing services consist primarily of processing federal, state and local withholding taxes on behalf of employers and remitting such taxes to the appropriate taxing authorities.

Employer Services' human resource information system provides applications software to customers for managing their payroll and human resource information databases.

Employer Services' employee assistance service provides confidential, around-the-clock assessment and referral services to customers' employees to help them address legal and financial problems, substance abuse, child care, elder care and other personal problems.

Payroll-related services are typically priced on a fee-per-item processed basis. Employer Services also derives a portion of its payroll tax filing revenue from interest income it receives on tax filing deposits temporarily held pending remittance on behalf of customers to taxing authorities. Hence these revenues vary as a result of changes in interest rates.

Employer Services has approximately 36,000 contracts with approximately 25,000 different customers.

Arbitron

Arbitron estimates audience size and demographics in the U.S. for local radio stations, and reports this and related data to its customers. The information is used by radio stations to price and sell advertising time and by advertising agencies and large corporate advertisers in purchasing advertising time.

- Arbitron uses listener diaries to gather radio listener data from sample households in 261 local markets for which it currently provides radio ratings. Respondents mail the diaries to Arbitron's processing center in Laurel (MD) where Arbitron compiles periodic audience measurement estimates.
- Arbitron also provides software applications and analytical services to assist subscribers in understanding and using this data. Arbitron is developing applications that will enable customers to link information provided by Arbitron's database with information from other databases (such as product purchase behavior) to enable customers to further refine sales strategies.
- MaximiSer is a PC application that gives radio broadcasters and advertising agencies access to Arbitron's database.
- This radio audience measurement service accounted for slightly less than 90% of Arbitron's revenue during 1994.
- Arbitron supplies these services to approximately 2,500 radio stations and 2,200 advertising agencies nationwide.
- Contracts with customers vary in length from one to seven years.

Arbitron is exploring opportunities to expand its information service offerings to the radio industry in the areas of marketing and promotion systems and systems to provide perceptual data for

programmers. The acquisition of Media Marketing Technologies, furthers the company's efforts in this area.

New services available from Arbitron include the following:

- In an effort provide services and technology to link audience measurement data with product purchasing data to enhance product marketing in the broadcast and cable industries, Arbitron has exchanged its interest in CMR for an interest in the *Scarborough Report*, which provides qualitative information regarding product/service usage and media usage in 58 major U.S. markets. Arbitron has the exclusive right to market the *Scarborough Report* to radio broadcaster and cable systems.
- LocalMotion service tracks radio, cable TV and newspaper ratings information and links it to detailed data about customers' lifestyle and product purchase behavior, helping stations prove to retailers how their respective consumer profiles match up. The information is available through a proprietary, respondent-level PC application.
- Cable Viewers' Shopping Survey is a customized service that allows cable systems to examine who among their audience is shopping at a prospect's (or competitor's) store; create cable network packages that reach prospects' customers; analyze how a detailed profile of their cable audience matches prospects' customers; and compare cable viewing to newspaper readership in the local market.
- Arbitron's survey analysis service provides cable customers with local rating, share and audience distribution data for individual programs and for specific blocks of the day or across days of the week.

Computing Devices International

Computing Devices International develops, manufactures and markets electronic systems, subsystems and components and provides systems integration and other services, primarily to government defense agencies.

Computing Devices' products and services feature its capabilities in signal processing, digital image manipulation, "ruggedized" subsystems for harsh environments and real-time software systems.

- These products and services are produced primarily through its operations in the U.S. and Canada, with only a small portion produced in the U.K.
- A majority of revenue is from products and services related to avionics systems, including the AN/AYK-14 standard Navy airborne mission computer systems; communications systems, including the Iris tactical command, control and communications system for the Canadian armed forces; and intelligence and surveillance systems, including advanced parallel processing, reconnaissance systems and imaging software.
- The remainder of revenue comes from products and services related to shipboard subsystems, anti-submarine warfare subsystems, ground subsystems, space processing, display subsystems and tactical reconnaissance systems.
- Approximately 81% of 1994 revenue came from government contracts that were fixed price contracts, including the Iris contract.
- Approximately 46% of Computing Devices' 1994 revenue came from contracts with the U.S. government or with prime contractors to the U.S. government and 36% of 1994 revenue was derived from contracts with the Canadian government or with prime contractors to the Canadian government.

- Approximately 53% (\$258 million) of Computing Devices' 1994 revenue was from international sales.

Contract examples include the following:

- Awarded in 1991, the Iris contract will modernize the tactical command, control and communications system used by the Canadian armed forces in defense and peacekeeping situations. Computing Devices recorded revenue of \$154 million, \$105 million and \$69 million in 1994, 1993 and 1992, respectively, from this contract. This contract has a remaining term of approximately six years and at the end of 1994 had estimated total remaining revenue of approximately \$751 million over the life of the contract.
- During 1993, Computing Devices was awarded a \$138 million contract from General Motors Diesel Division to supply the surveillance system for Canada's new light armored vehicle.
- The company has been awarded several production contracts from Grumman Melbourne Systems for programmable signal processors and disk drive data storage units for the Joint STARS program.

Clients

Clients, segmented by operating unit, include the following:

- *Employer Services*—Unisys Corporation, Toys R Us, National Semiconductor Corporation
- *Arbitron*—CBS, ABC Cap Cities, Infinity Broadcasting
- *Computing Devices International*—Canadian Armed Forces, U.S. Navy, U.S. Air Force, U.S. Army, General Motors Diesel Division, Royal Air Force, McDonnell Douglas Aerospace Company, Grumman Melbourne Systems, Bell

Helicopter Textron/Boeing Helicopters, Samsung Electronics, Hughes Missile Systems Company

Marketing and Sales

Employer Services markets its services through a direct sales force operating through more than 35 district offices. As of December 31, 1994, Employer Services had an estimated 365 salespeople compared to approximately 380 sales people as of December 31, 1993.

- Employer Services has also established marketing relationships with a number of banks and accounting firms.
- Employer Services markets its services by identifying customers that use or are contemplating using a third-party service provider. The most significant source of customer leads are referrals from existing customers and banks and accounting firms with which it has relationships.

Arbitron markets its products and services through a direct sales force operating in six cities around the U.S.

Computing Devices markets its products and services through a direct sales force operating through sales offices located in the U.S., Canada, the U.K. and France.

- Sales of products and services are made principally through competitive proposals in response to requests for bids from government agencies and prime contractors.
- In addition, Computing Devices has independent sales agents who represent Computing Devices' products and services in a number of European and Asian markets.

Alliances

Employer Services has a partnership with Advisory Communications Systems, Inc. (ACS) to jointly

market ACS' LawPhone legal services for small businesses.

Arbitron has a minority investment in Adcom Information Services, a California-based cable research company developing an audience measurement service designed for local cable operators.

Ceridian/Arbitron has a joint venture partnership—Competitive Media Reporting—with VNU Business Information Services, Inc. whereby Competitive Media Reporting compiles information regarding advertising expenditures, copies commercials, compiles video clips of news events and tracks space and estimated cost of advertisements in newspapers, magazines and other print media.

Competitors

Employer Services' primary competitors in the payroll processing market are Automatic Data Processing (ADP) and Paychex.

Arbitron does not currently have any major competitors for its radio audience measurement services. Arbitron competes with providers of other forms of research used by broadcasters, advertising agencies and advertisers.

Computing Devices major competitors include E-Systems, Inc., Loral Corporation and Hughes Electronics (General Motors).



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1994

Ceridian Corporation

Chairman, President

& CEO: Lawrence Perlman

8100 34th Avenue South

Minneapolis, MN 55425

Phone: (612) 853-8100

Fax: (612) 853-5300

Status:	Public
Employees:	7,400 (10/94)
Revenue, 9 mos. ending 9/30/94:	\$682,200,000
Revenue, FYE 12/31/93:	\$ 886,100,000

International)—and operates with approximately one-fourth the revenue, assets and employees employed five years ago.

Key Points

- Ceridian Corporation, known as Control Data Corporation until June 1992, has been significantly reshaped through divesting or discontinuing various business units and by narrowing and reorienting the focus of certain of its continuing operations.
- As a result of these reshaping efforts, Ceridian is now comprised of two business segments—Information Services (Employer Services and Arbitron) and Defense Electronics (Computing Devices
- During 1993, Ceridian clarified and repositioned the strategies of each of its businesses and continues to invest in technology, acquisitions and process improvements to enhance operating performance and revenue growth.
- In Employer Services, Ceridian began a rearchitecture of the payroll processing system, acquired a highly automated tax filing system through the purchase of Systems Tax Service, Inc., and expanded its sales force.

- In June 1994, Ceridian acquired Tesseract Corporation, a provider of integrated payroll, human resource and benefits administration systems. Tesseract's payroll software will be the core of Employer Services' new payroll system and will add an in-house payroll processing option for high-end customers, as well as benefits, claims, investment and retirement plan management applications.
- Effective the end of 1993, Ceridian discontinued its unprofitable syndicated television and cable ratings service offered through its Arbitron subsidiary and terminated about 700 employees.
- In May 1994, Ceridian sold its TeleMoney Services transaction services business, enabling Ceridian to concentrate its resources on growing Employer Services, Arbitron and Computing Devices International.
- A public offering of \$236 million of preferred stock in late 1993 enabled Ceridian to repay approximately 90% of its debt.

Company Description

Ceridian Corporation provides a range of products and services through two business segments—Information Services and Defense Electronics.

- The Information Services segment currently includes the following operations:
 - Ceridian Employer Services provides payroll processing, tax filing, human resources information management software, consulting services and employee assistance programs to more than 20,000 customers in a range of industries and markets.
 - The Arbitron Company provides radio audience measurement information and

media and marketing information to broadcasters, advertising agencies and advertisers.

- The Defense Electronics segment currently consists of the following businesses:
 - Computing Devices International develops, manufactures and markets electronic systems, subsystems and components and provides systems integration and other services primarily to government defense agencies.
 - Business Information Services is a small unit within Computing Devices that provides custom data processing applications for customers (primarily the U.S. government) and delivers them via its timesharing network. Prior to January 1, 1994, this unit reported to Information Services.

Company Strategy

Employer Services' strategy is to improve its operating margins and revenue growth by:

- *Investing in Technology*—Employer Services' existing payroll processing and payroll tax filing processes incorporated older technology, requiring significant manual processing and labor intensive installation.
 - In the second quarter of 1993, Employer Services began a multiyear project to redesign its payroll processing system to be more highly automated, easier to install and maintain and with greater flexibility.
 - The acquisition of Systems Tax Service in 1993 provided Employer Services with a more highly automated tax filing system and has replaced Employer Services' tax filing processing operations in Baltimore.

- By transferring the newly acquired payroll technology of Tesseract into Employer Services' data center environment, Ceridian expects to speed up the development cycle of its new product/service offerings. Ceridian plans to introduce a client/server human resource (HR) system for large customers in late 1995. A Windows-based version of Employer Services' HR software is expected to be available to mid-sized customers in early 1995.
 - Other actions to improve Employer Services' technology and automation included the December 1992 acquisition of the software applications division of Revelation Technologies. The company also completed the conversion of Employer Services' printing operations from impact printers to laser printers in 1992, eliminating the need to carry stock and forms.
 - *Consolidating Operations*—In conjunction with the development of a new payroll system, Employer Services plans to consolidate its district payroll processing centers. The company has created a national telephone service support center to provide a single point of contact for customer inquiries and continuing local district support.
 - *Increasing Productivity and Size of Sales Force*—Employer Services intends to orient its sales force more toward medium and large employers that tend to purchase a greater variety of services.
 - *Expanding Human Resource Offerings*—Employer Services' goal is to identify the overall human resource information management needs arising out of the employment relationship and address those needs through a range of services, including outsourcing, software applications and consulting.
 - *Making Strategic Acquisitions*—Employer Services intends to seek additional strategic acquisitions that would allow it either to increase its market penetration, improve its technology or provide additional products.
- Arbitron's primary strategy is to maintain its competitive position, increase its revenue and strengthen its profitability by:
- *Enhancing Radio Audience Measurement*—Arbitron intends to enhance its radio audience measurement service so as to increase the value of the service to customers and maintain a leading market share.
 - *Introducing Qualitative Services*—Arbitron is test marketing a new, locally oriented qualitative audience research service whose goal is to provide a profile of the broadcast audience in terms of local media, retail and consumer preferences so that local broadcasters will have information to help develop targeted sales and programming strategies to attract a larger share of the marketing dollars spent by local advertisers.
 - *Using Cooperative Arrangements*—Arbitron intends to further develop its capabilities and technologies through alliances and licensing agreements that will enable it to gather, analyze and integrate broadcasting, product purchasing and advertising data from various sources and provide the information and systems that broadcasters, advertising agencies and advertisers require to market their products more effectively.
- Computing Devices' strategy is to improve its competitive position and operating margins by:

- **Reducing Operating Costs**—In light of decreases in defense spending, over-capacity among defense contractors and increased price sensitivity from its government customers, Computing Devices believes its future success will depend in large measure on becoming a low cost provider of products and services. Toward this end, the company intends to reduce overhead and increase productivity through consolidating operations, increasing the level of automation in its product and development facilities and providing increased employee training.
- **Focusing in Areas of Expertise**—Computing Devices intends to continue to pursue tactical (as opposed to strategic) defense programs and will use technology developed through both internal and contract research and development. The company believes that spending on tactical systems will not be reduced to the same extent as spending on strategic systems and that greater emphasis will be placed on weapons sophistication, electronics, surveillance and intelligence.
- **Emphasizing Existing Geographic Markets**—Computing Devices intends to continue to emphasize specific segments of the North American and U.K. defense electronics markets where it believes significant opportunities exist, including opportunities to upgrade, enhance and retrofit existing military equipment.
- **Leveraging Existing Products for New Applications**—Computing Devices intends to

adapt existing products and services in response to business opportunities in other worldwide defense markets and in civilian and civil government markets. The company may establish cooperative arrangements with other companies where their expertise or familiarity with other markets would prove beneficial.

Financials

Ceridian's 1993 revenue reached \$886.1 million, a 7% increase over 1992 revenue of \$830.3 million. Three-year financial summary appears on the following page.

Results from continuing operations for 1993 included a fourth quarter net restructuring loss of \$67.0 million, which included \$75.9 million in restructuring charges for Information Services, \$5.5 million in charges for Computing Devices, partially offset by a net gain of \$14.4 million related to a tax refund.

- Information Services' charges included \$57.0 million resulting from the October 1993 decision to discontinue Arbitron's syndicated television and cable ratings service and \$18.9 million in charges related to consolidating Employer Services' payroll processing activities and centralizing customer service operations.
- The restructuring charges recorded by Computing Devices in the fourth quarter of 1993 related to actions taken to reduce employment levels in the U.S. and U.K. consistent with its objectives to reduce overhead.

Ceridian Corporation
Three-Year Financial Summary
(\$ Millions, except per share data)

Item	Fiscal Year		
	1993	1992	1991
Revenue	\$886.1	\$830.3	\$763.0
• Percent change from previous year	7%	9%	N/A
Income (loss) before taxes	\$(18.2)	\$(24.0)	\$70.2
	(a)	(a)	(a)
Earnings (loss) from continuing operations	\$(22.0)	\$(29.1)	\$66.1
Net income (loss)	\$(30.4)	\$(392.5)	\$(9.8)
	(b)(c)	(c)(d)	(b)(c)
Earnings (loss) per share from continuing operations	\$(0.52)	\$(0.69)	\$1.54
Net earnings (loss) per share	\$(0.71)	\$(9.22)	\$(0.24)
	(b)(c)	(c)(d)	(b)(c)

(a) Includes restructuring losses (gains) of \$67.0 million in 1993, \$76.2 million in 1992 and \$(16.2 million) in 1991.

(b) Includes extraordinary losses of \$8.4 million (\$0.19 per share) in 1993 and \$1.2 million (\$0.03 per share) in 1991, both due to early retirement of debt.

(c) Includes losses from discontinued operations of \$321.6 million (\$7.55 per share) in 1992 and \$74.7 million (\$1.75 per share) in 1991.

(d) Includes a \$41.8 million (\$0.98 per share) charge for a change in the method of accounting for postretirement health care benefits.

Revenue Analysis by Product/Service

A three-year financial summary by operating unit appears on the following page.

- The revenue growth in Employer Services was due to increased business volume in its payroll processing and tax filing operations, the acquisition of the software applications division of Revelation Technologies in late 1992, the purchase of Systems Tax Service and increased interest income due to larger average balances of payroll tax filing deposits during 1993.
- Arbitron's 1993 revenue decrease was almost entirely due to reduced revenue from local

market television and cable ratings (reflecting the trend among local stations to contract with only one ratings provider), a decline in Arbitron's share of that market, intense price competition and company's decision to discontinue the television and cable ratings service. This revenue decrease was only partially offset by an increase in Arbitron's revenue from radio ratings. It is anticipated revenue from Arbitron will substantially decrease in 1994 due to the discontinuance of the television and cable ratings service and the transfer of most of Arbitron's commercial monitoring revenue to its Competitive Media Reporting (CMR) joint venture.

- The revenue growth in Computing Devices was primarily due to increased business activity under the Iris contract to provide a communications system to the Canadian defense department, the September 1992 acquisition of the remaining 56% equity interest in a U.K. defense electronics systems provider and sales of equipment to Control

Data Systems, which began in August 1992. Growth in 1993 was tempered by the decrease in these equipment sales to Control Data Systems, together with the sale of a 90% interest in Barrios Technology, a systems integrator for NASA and associated contractors.

Ceridian Corporation
Three-Year Financial Summary by Operating Unit
 (\$ Millions)

Operating Unit	Fiscal Year					
	1993		1992		1991	
	\$	Percent of Total	\$	Percent of Total	\$	Percent of Total
Revenue						
Information Services						
- Employer Services	\$232.6	26%	\$209.9	25%	\$191.3	25%
- Arbitron	172.2	20%	178.3	21%	201.7	26%
- Other services (a)	<u>29.1</u>	<u>3%</u>	<u>30.7</u>	<u>4%</u>	<u>29.3</u>	<u>4%</u>
	\$433.9	49%	\$418.9	50%	\$422.3	55%
Defense Electronics						
- Computing Devices International	\$452.2	51%	\$402.2	49%	\$317.2	42%
Other (b)	—	—	\$9.2	1%	\$23.5	3%
Total Revenue	\$886.1	100%	\$830.3	100%	\$763.0	100%
Earnings (loss) before interest and taxes						
Information Services (c)	\$(36.8)	N/A	\$5.1	N/A	\$40.6	59%
Defense Electronics (d)	19.3	N/A	17.1	N/A	19.4	28%
Other (e)	7.4	N/A	(47.7)	N/A	8.9	13%
Total Earnings (loss)	\$(10.1)	—	\$(25.5)	—	\$68.9	100%

(a) Primarily includes revenue from TeleMoney Services and Business Information Services.

(b) Includes revenue from the Benefits Services division of Employer Services, which was sold during 1992 and from Quorum Systems, Credit Union Services and Redinet operations sold during 1991.

(c) Includes restructuring losses of \$75.9 million in 1993, \$30.9 million in 1992 and \$1.5 million in 1991.

(d) Includes restructuring losses of \$5.5 million in 1993, \$1.1 million in 1992 and \$1.3 million in 1991.

(e) Includes gains of \$14.4 million in 1993 and \$19.0 million in 1991 and restructuring losses of \$44.2 million in 1992.

Interim Results—Revenue for the nine months ending September 30, 1994 reached \$682.2 million, compared to \$659.2 million for the same period in 1993. Net earnings available to common stockholders reached \$48.1 million, compared to \$32.0 million for the same period a year ago.

- Revenue from Information Services was \$314.3 million, compared to \$319.7 million for the prior year's period.
- The decline was primarily attributed to the discontinuance of Arbitron's television ratings services, which had provided \$40.4 million of revenue the first nine months of 1993. Also contributing to the decrease were the year-end 1993 transfer from Arbitron to the CMR joint venture of contracts with certain advertising agencies for commercial monitoring services, which decreased Arbitron's revenue in the nine month comparison by about \$13.0 million, and the sale of the company's TeleMoney Services business in May 1994.
- Offsetting these declines was a 28% revenue increase in Employer Services and a 6% increase in the other aspects of Arbitron's business, principally its radio ratings service.
- Revenue from Defense Electronics was \$367.9 million, compared to \$339.5 million for the same period a year ago.
- Increases were primarily due to increased revenue, particularly in the third quarter, from the Iris contract to provide a communications system to the Canadian defense department. Offsetting a sizable portion of these revenue increases were the near completion at year-end 1993 of a contract to manufacture equipment for

Control Data Systems, Inc. and the July 1993 sale of the company's Barrios Technology subsidiary, activities which together had provided \$29.0 million of revenue the first nine months of 1993.

- Net earnings increased due to improvements in gross margins for both the Information Services and Defense Electronics segments.
- Information Services margins increased primarily due to the discontinuance of Arbitron's unprofitable television ratings service. Employer Services' gross margins improved for its tax filing operations as a result of the STS acquisition, with that improvement essentially offset by decreased margins in payroll processing operations, reflecting costs to establish and equip a national customer service center and related actions to upgrade communications.
- Improvements in Computing Devices' gross margins were due primarily to reduced low margin revenue from the manufacture of equipment for Control Data Systems, actions taken in 1993 to reduce employment levels in U.S. operations and increased gross margins on the Iris contract during the first nine months of 1994. Partially offsetting these improvements was the gross margin decrease on Computing Devices' U.K. operations due to decreased demand for the production of an avionics computer and provisions for costs to complete certain contracts.

Market Financials

Approximately 51% of Ceridian's 1993 revenue was derived from various government entities (domestic and foreign), 26% from various employers/businesses, 19% from the media and the remainder from banks and merchants.

Revenue from sales under prime contracts or subcontracts to the U.S. government were \$232 million (26% of revenue), \$239 million (29% of revenue) and \$249 million (33% of revenue) in 1993, 1992 and 1991, respectively, substantially all of which are reported in the Defense Electronics business segment.

Revenue from sales to the Canadian government were approximately \$137 million (15% of revenue), \$95 million (11% of revenue) and \$51 million (7% of revenue) in 1993, 1992 and 1991, respectively, substantially all of which are reported in the Defense Electronics business segment. Of the sales to the Canadian

government, \$105 million in 1993, \$69 million in 1992 and \$19 million in 1991 were from the Iris contract.

Geographic Markets

Approximately 76% of Ceridian's 1993 revenue was derived from the U.S. and 24% from international sources.

Virtually 100% of international sales were attributed to Computing Devices International's defense electronics operations primarily in Canada and the U.K.

A three-year summary of geographic sources of revenue follows:

Ceridian Corporation
Three-Year Source of Revenue Summary
(\$ Millions)

Geographic Market	Fiscal Year					
	1993		1992		1991	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$670.2	76%	\$663.5	80%	\$647.1	85%
International	215.9	24%	166.8	20%	115.9	15%
Total	\$886.1	100%	\$830.3	100%	\$763.0	100%

Acquisitions

In December 1994, Ceridian purchased the assets of two companies—Human Effectiveness Inc. (HEI), a Chicago-based employee assistance provider and Payroll Tax Management, Inc. (PTM), a payroll tax filing operation based in Glendale (CA)—in order to build Ceridian Employer Services' customer base.

- The HEI transaction expands the presence of Ceridian Employer Services' EAR employee assistance program in several major regional

markets. HEI had revenue of \$1 million from its employee assistance program in 1993.

- PTM's tax filing customers will be transitioned to Ceridian's Employer Services' Systems Tax Service unit. PTM had revenue of \$4.7 million in fiscal 1994.

On October 31, 1994, Ceridian acquired User Technology Services, Inc. (UserTech), a Connecticut-based provider of training services.

- Usertech, with 62 employees and revenue of approximately \$5.4 million for the fiscal year ending October 31, 1994, provides services that help customers' employees acquire the expertise they need to maximize the value of new information systems. It also provides communications to employees to introduce new technology, education and training, user procedures and workflow documentation and on-line performance support.
- Usertech operates throughout the U.S. from offices in Connecticut, Georgia, Illinois and New Jersey.
- Usertech will operate as a wholly owned subsidiary of Ceridian within Employer Services.

In June 1994, Ceridian acquired Tesseract Corporation of San Francisco for approximately \$60 million.

- Tesseract, with approximately 200 employees and 1993 revenue of \$28.9 million, provides advanced, integrated payroll, human resource and benefits administration software products and professional services for IBM cooperative environments, supporting mainframe, client/server and distributed platforms.
- Tesseract serves more than 150 customers ranging in size from 1,000 to 500,000 employees.
- Tesseract operates as a wholly owned subsidiary of Ceridian within Employer Services. It is expected Tesseract's 1994 revenue will approximate \$25 million.

In October 1993, Ceridian purchased Systems Tax Service, Inc. (STS) of Fountain Valley

(CA) for approximately one million shares of Ceridian common stock.

- STS, with 1993 revenue of about \$18.5 million, is a payroll tax filing processor with a highly automated tax filing system.
- The operations of STS have been merged into Employer Services.

Other acquisitions include the following:

Divestitures

Ceridian's results over the past five years have been significantly affected by the performance and subsequent sale, spin-off or closing of a number of its businesses. Recent divestitures include the following:

- In May 1994, Ceridian sold its TeleMoney Services unit and related network and computer center operations to First Data Resources, Inc. and received net cash proceeds of \$24.3 million.
 - TeleMoney Services provides network-based transaction services, credit and debit card authorization and check verification primarily to banks and merchants.
 - TeleMoney generated about \$20 million in revenue during 1993.
- Effective December 1993, Ceridian discontinued Arbitron's syndicated television and cable rating service. Through this service, Arbitron had provided local market television and cable audience measurement information gathered electronically and through written diaries. This service provided approximately 26% (\$44.8 million) of Arbitron's 1993 revenue.

- In past years, Ceridian invested in limited partnerships formed to construct and operate Business and Technology Centers (BTCs). In February 1994, Ceridian disposed of its interest in the remaining five partnerships, as well as the remaining BTC it owned.

Employees

As of December 31, 1993, Ceridian had approximately 7,600 employees. The company currently has approximately 7,400 full-time employees, segmented as follows:

Employer Services	3,300
Arbitron	900
Computing Devices Int'l.	3,100
Corporate and other	<u>100</u>
	7,400

Key Products and Services

Ceridian provides a range of processing services, applications software products and integration services through the following business units:

Ceridian Employer Services

Employer Services offers a range of payroll processing, payroll tax filing, human resource information systems, consulting services and employee assistance programs. During 1993, more than 80% of Employer Services' revenue was derived from payroll processing and payroll tax filing services.

Payroll processing consists primarily of preparing and furnishing employee payroll checks, direct deposit advices and supporting journals, summaries and other reports.

- Payroll processing is currently conducted at district offices located throughout the U.S., all of which are linked in a nationwide network.

- Employer Services' payroll processing system allows customers to input their own payroll data via PCs, transmit the data on-line to Employer Services for processing, retrieve reports and data files from Employer Services and print reports and, in certain instances, payroll checks or direct deposit advices on-site.

- Customers can also input payroll data by telephone or batch transmittal, with payroll checks and related reports prepared by Employer Services at one of its district processing centers.

- Employer Services' payroll system also interfaces with both customer and third-party transaction processing systems to facilitate services such as direct deposit of payroll checks.

- Through its Minidata Services, Inc. subsidiary, Employer Services provides payroll services to customers in the mid-Atlantic states with fewer than 100 employees.

- Tesseract services more than 130 customers with more than 5,000 employees.

Payroll tax filing services consist primarily of processing federal, state and local withholding taxes on behalf of employers and remitting such taxes to the appropriate taxing authorities.

Employer Services' human resource information system provides applications software to customers for managing their payroll and human resource information databases.

Employer Services' employee assistance service provides confidential, around-the-clock

assessment and referral services to customers' employees to help them address legal and financial problems, substance abuse, child care, elder care and other personal problems.

Payroll-related services are typically priced on a fee-per-item processed basis. Employer Services also derives a portion of its payroll tax filing revenue from interest income it receives on tax filing deposits temporarily held pending remittance on behalf of customers to taxing authorities. Hence these revenues vary as a result of changes in interest rates.

Employer Services has approximately 36,000 contracts with approximately 23,375 customers.

Arbitron

Arbitron estimates audience size and demographics in the U.S. for local radio stations, and reports this and related data to its customers. The information is used by radio stations to price and sell advertising time and by advertising agencies and large corporate advertisers in purchasing advertising time.

- Arbitron uses listener diaries to gather radio listener data from sample households in the approximately 260 local markets for which it currently provides radio ratings. Respondents mail the diaries to Arbitron's processing center in Laurel (MD) where Arbitron compiles periodic audience measurement estimates.
- This radio audience measurement service represents more than 90% of Arbitron's revenue.
- Arbitron supplies these services to approximately 2,000 radio stations and 2,500 advertising agencies.

- Contracts with customers vary in length from one to seven years.

Arbitron also provides software applications and analytical services to assist subscribers in understanding and using this data.

New services available from Arbitron include the following:

- LocalMotion service tracks radio, cable TV and newspaper ratings information and links it to detailed data about customers' lifestyle and product purchase behavior, helping stations prove to retailers how their respective consumer profiles match up. The information is available through a proprietary, respondent-level PC application.
- Cable Viewers' Shopping Survey is a customized service that allows cable systems to examine who among their audience is shopping at a prospect's (or competitor's) store; create cable network packages that reach prospects' customers; analyze how a detailed profile of their cable audience matches prospects' customers; and compare cable viewing to newspaper readership in the local market.
- Arbitron's survey analysis service provides cable customers with local rating, share and audience distribution data for individual programs and for specific blocks of the day or across days of the week.

Computing Devices International

Computing Devices International develops, manufactures and markets electronic systems, subsystems and components and provides systems integration and other services, primarily to government defense agencies.

Computing Devices' products and services feature its capabilities in signal processing, digital image manipulation, "ruggedized" subsystems for harsh environments and real-time software systems.

- These products and services are produced primarily through its operations in the U.S., Canada and the U.K.
- A majority of revenue is from products and services related to avionics systems, including the AN/AYK-14 standard Navy airborne mission computer systems; communications systems, including the Iris tactical command, control and communications system for the Canadian armed forces; and intelligence and surveillance systems, including advanced parallel processing and reconnaissance systems.
- The remainder of revenue comes from products and services related to shipboard subsystems, anti-submarine warfare subsystems, ground subsystems, space processing, display subsystems and tactical reconnaissance systems.
- Approximately 78% of 1993 revenue came from fixed price contracts.

Contract examples include the following:

- Awarded in 1991, the Iris contract will modernize the tactical command, control and communications system used by the Canadian armed forces in defense and peacekeeping situations. Computing Devices recorded revenue of \$105 million in 1993 and \$69 million in 1992 from this contract. This contract has a remaining term of approximately seven years and at the end of 1993 had estimated total remaining

revenue of approximately \$860 million over the life of the contract.

- During 1993, Computing Devices was awarded a \$138 million contract from General Motors Diesel Division to supply the surveillance system for Canada's new light armored vehicle.
- The company has been awarded several production contracts from Grumman Melbourne Systems for programmable signal processors and disk drive data storage units for the Joint STARS program.

Clients

Employer Services—Unisys Corporation, Toys R Us, National Semiconductor Corporation

Arbitron—CBS, ABC Cap Cities, Infinity Broadcasting

Computing Devices International—Canadian Armed Forces, U.S. Navy, U.S. Air Force, U.S. Army, General Motors Diesel Division, Royal Air Force, McDonnell Douglas Aerospace Company, Grumman Melbourne Systems, Bell Helicopter Textron/Boeing Helicopters, Samsung Electronics

Marketing and Sales

Employer Services markets its services through a direct sales force operating through more than 35 district offices. As of December 31, 1993, Employer Services had approximately 380 salespeople compared to approximately 300 sales people as of December 31, 1992.

- Employer Services has also established marketing relationships with a number of banks and accounting firms.

- Employer Services markets its services by identifying customers that use or are contemplating using a third-party service provider. The most significant source of customer leads are referrals from existing customers and banks and accounting firms with which it has relationships.

Arbitron markets its products and services through a direct sales force operating in six cities around the U.S. As of December 31, 1993, Arbitron had 60 salespeople.

Computing Devices markets its products and services through a direct sales force operating through sales offices located in the U.S., Canada, the U.K. and France. As of December 31, 1993, Computing Devices had 50 salespeople.

- Sales of products and services are made principally through competitive proposals in response to requests for bids from government agencies and prime contractors.
- In addition, Computing Devices has independent sales agents who represent Computing Devices' products and services in a number of European and Asian markets.

Alliances

Employer Services has a partnership with Advisory Communications Systems, Inc. (ACS) to jointly market ACS' LawPhone legal services for small businesses.

Arbitron has a minority investment in Adcom Information Services, a California-based cable research company developing an audience measurement service designed for local cable operators.

Ceridian/Arbitron has a joint venture partnership—Competitive Media

Ceridian Corporation
December 1994

Reporting—with VNU Business Information Services, Inc. whereby Competitive Media Reporting compiles information regarding advertising expenditures, copies commercials, compiles video clips of news events and tracks space and estimated cost of advertisements in newspapers, magazines and other print media.

Competitors

Employer Services' primary competitors in the payroll processing market are Automatic Data Processing (ADP) and Paychex.

Arbitron does not currently have any major competitors for its radio audience measurement services. Arbitron competes with providers of other forms of research used by broadcasters, advertising agencies and advertisers.

Computing Devices major competitors include E-Systems, Inc., Loral Corporation and Hughes Electronics (General Motors).

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1995

Ceridian Employer Services

President: Patrick C. Sommers
8100 34th Avenue South
Minneapolis, MN 55425-1640
Phone: (800) 729-7655
Fax: (612) 853-8386

Status:	Operating Unit
Parent:	Ceridian Corporation
Employees:	3,300 (12/94)
Revenue:	\$ 303,300,000
Fiscal Year End:	12/31/94

Key Points

- Ceridian has clarified and repositioned the strategies of each of its businesses and continues to invest in technology, acquisitions and process improvements to enhance operating performance and revenue growth.
- Employer Services has begun a rearchitecture of its payroll processing system, acquired a highly automated tax filing system through the purchase of Systems Tax Service, Inc. and expanded its sales force. In December 1994, Ceridian expanded its tax filing customer base with the acquisition of Payroll Tax Management, Inc.
- During mid-1994, Ceridian acquired Tesseract Corporation, a provider of integrated payroll, human resource and benefits administration systems. Tesseract's payroll software will be the core of Employer Services' new payroll system and adds an in-house payroll processing option for high-end customers, as well as benefits, claims, investment and retirement plan management applications.
- In early 1995, Ceridian announced a series of agreements with IBM ISSC under which ISSC will provide centralized payroll processing services for Employer Services as part of Ceridian's program to consolidate payroll processing from a district to a centralized level. ISSC and Employer Services will also remarket certain of each other's products and services.
- During the fourth quarter of 1994, Employer Services also expanded its operations with the

acquisitions of training services provider—User Technology Services—and employee assistance services provider—Human Effectiveness, Inc.

Company Description

Ceridian Employer Services provides payroll processing, tax filing, human resources information management software, consulting services and employee assistance programs to more than 25,000 different customers from a range of industries and markets.

Company Strategy

Employer Services' strategy is to improve its operating margins and revenue growth by:

- *Investing in Technology*—Employer Services' existing payroll processing and payroll tax filing processes incorporated older technology, requiring significant manual processing and labor intensive installation.
- In the second quarter of 1993, Employer Services began a multiyear project to redesign its payroll processing system to be more highly automated, easier to install and maintain and have greater flexibility.
- The acquisition of Systems Tax Service in 1993 provided Employer Services with a more highly automated tax filing system and has replaced Employer Services' tax filing processing operations in Baltimore.
- By transferring the newly acquired payroll and human resource technology of Tesseract into Employer Services' data center environment, Ceridian expects to speed up the development cycle of its new product/service offerings. Ceridian plans to introduce a client/server human resource (HR) system for large customers and a client/server integrated HR/payroll system for large and midsize customers by late 1995. During 1995, Employer Services plans to

introduce the Integrated HR/Payroll System for Windows, a seamless HR/payroll system for Windows based on Tesseract's payroll software.

- Other actions to improve Employer Services' technology and automation included the December 1992 acquisition of the software applications division of Revelation Technologies. The company also completed the conversion of Employer Services' printing operations from impact printers to laser printers in 1992, eliminating the need to carry stock and forms.
- *Consolidating Operations*—Employer Services is consolidating its district payroll processing centers (as evidenced by its recent services agreement with IBM ISSC) and has created a national telephone service support center to provide a single point of contact for customer inquiries.
- *Increasing Productivity of Sales Force*—Employer Services intends to orient its sales force more toward medium and large employers that tend to purchase a greater variety of services. For small employers, Employer Services is evaluating expanding the Minidata payroll processing system into additional markets.
- *Expanding Human Resource Offerings*—Employer Services' goal is to identify the overall human resource information management needs arising out of the employment relationship and address those needs through a range of services, including outsourcing, software applications and consulting.
- *Making Strategic Acquisitions*—Employer Services intends to seek additional strategic acquisitions that would allow it either to increase its market penetration, increase its technology or provide additional products.

Financials

Employer Services' 1994 revenue reached \$303.3 million, a 30% increase over 1993 revenue of \$232.6 million. A three-year revenue summary follows:

**Ceridian Employer Services
Three-Year Revenue Summary**
(\$ Millions, except per share data)

Item	Fiscal Year		
	1994	1993	1992
Revenue	\$303.3	\$232.6	\$209.9
• Percent change from previous year	30%	11%	10%

More than half of Employer Services' revenue growth during 1994 was attributed to acquisitions, most significantly the October 1993 acquisition of Systems Tax Service tax filing business and the June 1994 acquisition of Tesseract Corporation.

- Apart from acquisitions, Employer Services' revenue increased approximately 14% from 1993 to 1994, primarily reflecting increased payroll processing revenue, due largely to new customer installations and an increased year-end 1993 retention rate for existing customers.
- The growth was also due to increased revenue from payroll tax filing fees and investment income due largely to higher percent of Employer Services' payroll processing customers also using its tax filing service.

Apart from possible future acquisitions, Employer Services' revenue growth is expected to be between 15% and 20% in 1995.

- Such increase would reflect a full year's revenue from Tesseract and from User Technology Services.
- Revenue should also increase as a result of the December 1994 acquisitions of Payroll Tax Management and the customer base of Human Effectiveness, Inc.
- Revenue in 1995 is also expected to benefit from increases in U.S. interest rates during 1994 and

early 1995, which should result in an increased average investment yield on payroll tax filing deposits and from a 20% increase from 1993 to 1994 in the annualized revenue value of orders received by Employer Services.

Interim Results

Revenue for the three months ending March 31, 1995 reached \$100.4 million, compared to \$77.5 million for the same period in 1994.

Market Financials

Employer Services provides its products and services to employers to help them manage their work forces more effectively. Clients come from a variety of industries, from small and medium-sized organizations to multiple divisions of Fortune 500 companies.

Geographic Markets

Virtually 100% of Employer Services' revenue is derived from the U.S.

Acquisitions

In December 1994, Ceridian purchased the assets of two companies—Human Effectiveness Inc. (HEI), a Chicago-based employee assistance provider and Payroll Tax Management, Inc. (PTM), a payroll tax filing operation based in Glendale (CA)—in order to build Ceridian Employer Services' customer base.

- The HEI transaction expands the presence of Ceridian Employer Services' EAR employee

assistance program in several major regional markets. HEI had revenue of \$1 million from its employee assistance program in 1993.

- PTM's tax filing customers will be transitioned to Ceridian's Employer Services' Systems Tax Service unit. PTM had revenue of \$3.8 million in fiscal 1994.

On October 31, 1994, Ceridian acquired User Technology Services, Inc. (UserTech), a Connecticut-based provider of training services.

- UserTech, with 62 employees and revenue of approximately \$4.4 million for the fiscal year ending October 31, 1994, provides services that help customers' employees acquire the expertise they need to maximize the value of new information systems. It also provides communications to employees to introduce new technology, education and training, user procedures and workflow documentation and on-line performance support.
- UserTech operates throughout the U.S. from offices in Connecticut, Georgia, Illinois and New Jersey.
- UserTech now operates as wholly owned subsidiary of Ceridian within Employer Services.
- The acquisition is an important part of Ceridian's strategy to successfully implement new products being launched through Employer Services in the coming months.

In June 1994, Ceridian acquired Tesseract Corporation of San Francisco for approximately \$60 million.

- Tesseract, with approximately 200 employees and 1993 revenue of \$28.9 million, provides advanced, integrated payroll, human resource and benefits administration software products and professional services for IBM cooperative environments, supporting mainframe, client/server and distributed platforms.

- Tesseract serves more than 150 customers ranging in size from 1,000 to 500,000 employees.
- Tesseract operates as a wholly owned subsidiary of Ceridian within Employer Services.
- Tesseract has provided Ceridian with a proven payroll processing software application that contains the features desired by Employer Services and is being adapted to run in Employer Services' multicustomer data center environment.

In October 1993, Ceridian purchased Systems Tax Service, Inc. (STS) of Fountain Valley (CA) for approximately one million shares of Ceridian common stock.

- STS, with 1993 revenue of about \$18.5 million, is a payroll tax filing processor with a highly automated tax filing system.
- The operations of STS have been merged into Employer Services.

Employees

Employer Services currently has about 3,300 employees.

Key Products and Services

Employer Services offers a range of payroll processing, payroll tax filing, human resource information services and employee assistance programs. During 1994, more than 82% of Employer Services' revenue was derived from payroll processing and payroll tax filing services.

Processing Services

Payroll processing consists primarily of preparing and furnishing employee payroll checks, direct deposit advices and supporting journals, summaries and other reports.

- Payroll processing is currently conducted at district offices located throughout the U.S., all of which are linked in a nationwide network.

- In January 1995, Ceridian announced a technology alliance with IBM ISSC under which ISSC will provide systems management for Employer Services' payroll processing in order to consolidate processing from district offices into centralized facilities. The other aspects of Employer Services' payroll processing activities, such as printing of checks and reports, will continue to occur in its district offices. Employer Services will also continue to provide customers with all software development. The agreement extends through December 31, 2004.
- Employer Services' payroll processing system allows customers to input their own payroll data via PCs, transmit the data on-line to Employer Services for processing, retrieve reports and data files from Employer Services and print reports and, in certain instances, payroll checks or direct deposit advices on-site.
- Customers can also input payroll data by telephone or batch transmittal, with payroll checks and related reports prepared by Employer Services at one of its district processing centers.
- Employer Services' payroll system also interfaces with both customer and third-party transaction processing systems to facilitate services such as direct deposit of payroll checks.
- Through its Minidata Services, Inc. subsidiary, Employer Services provides payroll services to customers in the mid-Atlantic states with fewer than 100 employees.

Payroll tax filing services consist primarily of processing federal, state and local withholding taxes on behalf of employers and remitting such taxes to the appropriate taxing authorities.

Employer Services' human resource information service provides applications software to customers for combining their payroll and human resource information databases.

Employer Services' EAR® employee assistance service provides confidential, around-the-clock assessment and referral services to customers' employees to help them address legal and financial problems, substance abuse, child care, elder care and other personal problems.

Specific processing services offered by Employer Services include the following:

- Signature™ Payroll Services include the following:
 - Basic services include issuing paychecks, completing electronic funds transfers, and meeting internal, government, and third-party reporting requirements, including labor and job cost reporting.
 - Reports can be defined from over 1,500 data elements on each employee; and magnetic media is available for wage and tax reporting.
 - Pay Analysis Reporting, a tool for analyzing and controlling payroll costs, provides payroll register flexibility.
 - Unlike other payroll services, Signature services include self-mailer checks—signed, sealed, and sorted in the sequence desired for easy distribution—plus all reports delivered at the same time as the paychecks.
- Signature™ Tax Filing Services include the preparation, filing, and deposit of all tax obligations, accurately and on time. Federal, state, and local tax information is captured automatically from Signature Payroll Services.

Software Products

Tesseract HRMS products include the following:

- ActivBenefits contains functions to cover all aspects of benefit and flexible benefit administration, including non-discrimination testing, COBRA, tax reform and legislative

- Two other features of Orchestrator, Xpresscheck™ and Xpressmaster™, enable customers to produce completely automated paychecks at their microcomputers—from calculating taxes and printing checks to updating the Signature payroll master files.
- HR-1® is an HR system that operates independently but can be interfaced to other applications and processes such as payroll.
- In 1995, Ceridian Employer Services is introducing its Integrated HR/Payroll System for DOS and Integrated HR/Payroll System for Windows.
- Designed for the two main platforms in use today, this system gives customers seamless information interchange between human resources and payroll, from one shared database.
- The basic payroll module lets users combine desktop payroll management with Ceridian mainframe processing. The system is available with a basic HR module—to cover essential HR requirements—or an expanded module for more advanced functionality, including expanded capabilities for government compliance.
- In the near future, Ceridian will introduce a number of “snap-in” HR and benefits modules, allowing customers to mix and match, according to their specific requirements.

Accent Plus™ Services are specialized consulting and customization services for organizations with complex human resources/payroll environments.

Payroll-related services are typically priced on a fee-per-item processed basis. Employer Services also derives a portion of its payroll tax filing revenue from interest income it receives on tax filing deposits temporarily held pending remittance on behalf of customers to taxing authorities. Hence these revenues vary as a result of changes in interest rates.

User Technology Services (UserTech), acquired during 1994, provides training, communications and other services that give customers' employees the expertise to maximize the value of new information systems. Part of its role is to help Employer Services with implementation of its new products. It also assists customers who are redesigning processes internally.

Clients

Employer Services has approximately 36,000 contracts with approximately 25,000 different customers.

A sample of Employer Services' clients includes Unisys Corporation, Toys R Us and National Semiconductor Corporation.

Marketing and Sales

Employer Services markets its services through a direct sales force operating through more than 35 offices located through the U.S..

- As of December 31, 1994, Employer Services had approximately 365 sales people, compared to approximately 380 sales people as of December 1993 and 300 sales people as of December 31, 1992.
- The moderate decrease in the size of the sales force from 1993 to 1994 reflects increased concentration of sales and marketing efforts on medium and large employers.

Employer Services has also established marketing relationships with banks, accounting firms and insurance companies whereby it offers its services to the business clients of these entities.

In January 1995, Employer Services entered into a marketing agreement with IBM ISSC under which ISSC will remarket Employer Services' payroll and tax filing services and Tesseract software and services where payroll software and services are required as part of a larger information technology outsourcing project. Employer Services will jointly

compliance, eligibility processing, participation reporting, billing and carrier reporting.

- Investment Plan Manager (IPM) handles all of the administration, reporting and analysis requirements for 401(a), 401(k), IRAs, Employee Stock Ownership programs, savings and other defined contribution programs.
- Claims Processing System (CPS) processes all types of medical, drug, dental, vision and hospital claims. CPS also provides analysis and health care cost containment through case management, COB, claims capture and correspondence.
- Retirement Plan Manager (RPM) provides administration functions for defined benefit plans, including historical earnings and hours recordkeeping, service calculation, social security benefit calculations, final average earnings and benefits calculations.
- ActivHR functions include employee identification, government compliance, applicant and skills tracking, education, training and development, salary planning, compensation, position control, health and safety.
- ActivPayroll provides earning control, tax administration, Canadian tax processing, deduction control, on-line checks, accrual control, labor distribution, payroll accounting and inquiry, time reporting, batch processing and payroll reporting.

Tesseract products are available for centralized, client/server and fully distributed platforms.

- The products support the major IBM mainframe database management systems, including DB2. Cooperatively, Tesseract's Enterprise Server allows data to be distributed to users running OS/2 or Windows 3.0, as well as nonprogrammable terminals.
- Tesseract's first generation of client/server products consists of products that can be used individually,

or in combination, to enable any customer to distribute functions and data.

- ReportCenter distributes a replica or subset of a production database to a relational database on UNIX, Windows NT, OS/2 or Netware servers for querying, reporting, charting, analysis, project management etc. ReportCenter is for customers who wish to distribute data to lower the cost of querying and reporting, while remaining integrated with more centralized servers for higher-performance, transaction-oriented products like Payroll, Benefits and Human Resources.
- ActivClient supports Windows and OS/2 and provides a graphical user interface to Tesseract's mainframe server products.

Other software products offered through Employer Services include the following:

- HR/PR Ensemble™ is a software product that fully integrates payroll, human resources and tax filing information into a single database. Operating from a single-user workstation, in a local-area network, or a wide-area network, Ensemble allows users to access information in real-time.
- Orchestrator® Encore is a microcomputer-to-mainframe link that allows Employer Services' processing services clients to enter payroll data via their microcomputers, then transmit the information to Employer Services for processing.
- Orchestrator also enables users to retrieve report and data files for ad hoc reporting or integration with popular software programs, including Lotus 1-2-3, dBase, and Microsoft Word, as well as PC-to-PC for consolidating departmental or multilocation information.
- An electronic timeclock interface to payroll is available through Orchestrator to facilitate automation from punch-in to paycheck.

market with IBM ISSC its information technology services where a customer requires information technology outsourcing beyond Employer Services' payroll services.

Employer Services markets its services by identifying customers that use or are contemplating using a third-party service provider. The most significant source of customer leads are referrals from existing customers and banks and accounting firms with which it has relationships. The company also identifies potential customers through newspaper articles, periodicals, trade publications and direct mailings.

Alliances

Employer Services has a partnership with Advisory Communications Systems, Inc. (ACS) to jointly market ACS' LawPhone legal services for small businesses.

Competitors

Employer Services' primary competitors in the payroll processing market are Automatic Data Processing (ADP) and Paychex.

Tesseract's software competitors include Integral Systems, PeopleSoft, SAP America and D&B Software.

INPUT Assessment

The company's strengths include:

- Industry-leading service and support
- The first "seamless", integrated payroll/human resources system
- Well-rounded offerings to help companies manage the employment relationship—payroll, HR, tax filing, employee assistance services and consulting

Challenges over the coming year include:

- Bringing new payroll and HR systems to market

- Implementing Windows and client/server technology
- Maintaining profit margins

Parent Company

Ceridian Corporation
8100 34th Avenue South
Minneapolis, MN 55425
Phone: (612) 853-8100
Fax: (612) 853-5300

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1994

Ceridian Employer Services

President: Patrick C. Sommers
8100 34th Avenue South
Minneapolis, MN 55425-1640
Phone: (800) 729-7655
Fax: (612) 853-8386

Status:	Operating Unit
Parent:	Ceridian Corporation
Employees:	3,300 (10/94)
Revenue, 9 mos. ending 9/30/94:	\$218,000,000
Revenue, FYE 12/31/93:	\$ 232,600,000

Key Points

- During 1993, Ceridian clarified and repositioned the strategies of each of its businesses and continues to invest in technology, acquisitions and process improvements to enhance operating performance and revenue growth.
- In Employer Services, Ceridian began a rearchitecture of the payroll processing system, acquired a highly automated tax filing system through the purchase of Systems Tax Service, Inc., and expanded its sales force.

- In June 1994, Ceridian acquired Tesseract Corporation, a provider of integrated payroll, human resource and benefits administration systems. Tesseract's payroll software will be the core of Employer Services' new payroll system and will add an in-house payroll processing option for high-end customers, as well as benefits, claims, investment and retirement plan management applications.

Company Description

Ceridian Employer Services provides payroll processing, tax filing, human resources information management software, consulting services and employee assistance programs to more than 20,000 customers from a range of industries and markets.

Company Strategy

Employer Services' strategy is to improve its operating margins and revenue growth by:

- *Investing in Technology*—Employer Services' existing payroll processing and payroll tax filing processes incorporated older technology, requiring significant manual processing and labor intensive installation.
- In the second quarter of 1993, Employer Services began a multiyear project to redesign its payroll processing system to be more highly automated, easier to install and maintain and with greater flexibility.
- The acquisition of Systems Tax Service in 1993 provided Employer Services with a more highly automated tax filing system and has replaced Employer Services' tax filing processing operations in Baltimore.
- By transferring the newly acquired payroll and human resource technology of Tesseract into Employer Services' data center environment, Ceridian expects to speed up the development cycle of its new product/service offerings. Ceridian plans to introduce a client/server human resource (HR) system for large customers in late 1994 and a client/server integrated HR/payroll system for large and midsized customers by mid-1995. A Windows-based version of Employer Services' HR software will be available to midsized customers at the start of 1995.
- Other actions to improve Employer Services' technology and automation included the December 1992 acquisition of the software applications division of Revelation

Technologies. The company also completed the conversion of Employer Services' printing operations from impact printers to laser printers in 1992, eliminating the need to carry stock and forms.

- *Consolidating Operations*—Employer Services is consolidating its district payroll processing centers and has created a national telephone service support center to provide a single point of contact for customer inquiries.
- *Increasing Productivity of Sales Force*—Employer Services intends to orient its sales force more toward medium and large employers that tend to purchase a greater variety of services. For small employers, Employer Services is evaluating expanding the Minidata payroll processing system into additional markets.
- *Expanding Human Resource Offerings*—Employer Services' goal is to identify the overall human resource information management needs arising out of the employment relationship and address those needs through a range of services, including outsourcing, software applications and consulting.
- *Making Strategic Acquisitions*—Employer Services intends to seek additional strategic acquisitions that would allow it either to increase its market penetration, increase its technology or provide additional products.

Financials

Employer Services' 1993 revenue reached \$232.6 million, an 11% increase over 1992 revenue of \$209.9 million. A three-year revenue summary follows:

**Ceridian Employer Services
Three-Year Revenue Summary**
(\$ Millions, except per share data)

Item	Fiscal Year		
	1993	1992	1991
Revenue	\$232.6	\$209.9	\$191.3
• Percent change from previous year	11%	10%	7.7%

The revenue growth in Employer Services was attributed to increased business volume in its payroll processing and tax filing operations, the acquisition of the software applications division of Revelation Technologies in late 1992, the purchase of Systems Tax Service and increased interest income due to larger average balances of payroll tax filing deposits during 1993.

Interim Results—Revenue for the nine months ending September 30, 1994 reached \$218.0 million, a 28% increase over \$170.1 million for the same period in 1993.

- Almost half of the revenue growth in the nine month comparison involved Employer Services' payroll tax filing operations, reflecting both increased fees and increased interest income primarily as a result of the acquisition of Systems Tax Service's tax filing business and a higher percent of Employer Services' payroll processing customers electing to also use its tax filing service.
- Revenue from Employer Services' payroll processing operations increased approximately 11%, reflecting new customer installations and an increased retention rate for existing customers.

Market Financials

Employer Services provides its products and services to employers to help them manage their

work forces more effectively. Clients come from a variety of industries, from small and medium-sized organizations to multiple divisions of Fortune 500 companies.

Geographic Markets

Virtually 100% of Employer Services' revenue is derived from the U.S.

Acquisitions

In December 1994, Ceridian purchased the assets of two companies—Human Effectiveness Inc. (HEI), a Chicago-based employee assistance provider and Payroll Tax Management, Inc. (PTM), a payroll tax filing operation based in Glendale (CA)—in order to build Ceridian Employer Services' customer base.

- The HEI transaction expands the presence of Ceridian Employer Services' EAR employee assistance program in several major regional markets. HEI had revenue of \$1 million from its employee assistance program in 1993.
- PTM's tax filing customers will be transitioned to Ceridian's Employer Services' Systems Tax Service unit. PTM had revenue of \$4.7 million in fiscal 1994.

On October 31, 1994, Ceridian acquired User Technology Services, Inc. (UserTech), a Connecticut-based provider of training services.

- Usertech, with 62 employees and revenue of approximately \$5.4 million for the fiscal year ending October 31, 1994, provides services that help customers' employees acquire the expertise they need to maximize the value of new information systems. It also provides communications to employees to introduce new technology, education and training, user procedures and workflow documentation and on-line performance support.
- Usertech operates throughout the U.S. from offices in Connecticut, Georgia, Illinois and New Jersey.
- Usertech will operate as wholly owned subsidiary of Ceridian within Employer Services.
- The acquisition is an important part of Ceridian's strategy to successfully implement new products being launched through Employer Services in the coming months.

In June 1994, Ceridian acquired Tesseract Corporation of San Francisco for approximately \$60 million.

- Tesseract, with approximately 200 employees and 1993 revenue of \$28.9 million, provides advanced, integrated payroll, human resource and benefits administration software products and professional services for IBM cooperative environments, supporting mainframe, client/server and distributed platforms.
- Tesseract serves more than 150 customers ranging in size from 1,000 to 500,000 employees.
- Tesseract operates as a wholly owned subsidiary of Ceridian within Employer

Services. It is expected Tesseract's 1994 revenue will approximate \$25 million.

In October 1993, Ceridian purchased Systems Tax Service, Inc. (STS) of Fountain Valley (CA) for approximately one million shares of Ceridian common stock.

- STS, with 1993 revenue of about \$18.5 million, is a payroll tax filing processor with a highly automated tax filing system.
- The operations of STS have been merged into Employer Services.

Employees

Employer Services currently has about 3,300 employees.

Key Products and Services

Employer Services offers a range of payroll processing, payroll tax filing, human resource information services and employee assistance programs. During 1993, more than 80% of Employer Services' revenue was derived from payroll processing and payroll tax filing services.

Payroll processing consists primarily of preparing and furnishing employee payroll checks, direct deposit advices and supporting journals, summaries and other reports.

- Payroll processing is currently conducted at district offices located throughout the U.S., all of which are linked in a nationwide network.
- Employer Services' payroll processing system allows customers to input their own payroll data via PCs, transmit the data on-line to Employer Services for processing, retrieve reports and data files from Employer Services and print reports and, in certain instances, payroll checks or direct deposit advices on-site.

- Customers can also input payroll data by telephone or batch transmittal, with payroll checks and related reports prepared by Employer Services at one of its district processing centers.
- Employer Services' payroll system also interfaces with both customer and third-party transaction processing systems to facilitate services such as direct deposit of payroll checks.
- Through its Minidata Services, Inc. subsidiary, Employer Services provides payroll services to customers in the mid-Atlantic states with fewer than 100 employees.

Payroll tax filing services consist primarily of processing federal, state and local withholding taxes on behalf of employers and remitting such taxes to the appropriate taxing authorities.

Employer Services' human resource information service provides applications software to customers for combining their payroll and human resource information databases.

Employer Services' EAR® employee assistance service provides confidential, around-the-clock assessment and referral services to customers' employees to help them address legal and financial problems, substance abuse, child care, elder care and other personal problems.

Specific processing services offered by Employer Services include the following:

- Signature™ Payroll Services include the following:
 - Basic services include issuing paychecks, completing electronic funds transfers, and meeting internal, government, and third-party

reporting requirements, including labor and job cost reporting.

- Reports can be defined from over 1,500 data elements on each employee; and magnetic media is available for wage and tax reporting.
- Pay Analysis Reporting, a tool for analyzing and controlling payroll costs, provides payroll register flexibility.
- Unlike other payroll services, Signature services include self-mailer checks—signed, sealed, and sorted in the sequence desired for easy distribution—plus all reports delivered at the same time as the paychecks.

- Signature™ Tax Filing Services include the preparation, filing, and deposit of all tax obligations, accurately and on time. Federal, state, and local tax information is captured automatically from Signature Payroll Services.

Specific software products offered through Employer Services include the following:

- HR/PR Ensemble™ is a software product that fully integrates payroll, human resources and tax filing information into a single database. Operating from a single-user workstation, in a local-area network, or a wide-area network, Ensemble allows users to access information in real-time.
- Orchestrator® Encore is a microcomputer-to-mainframe link that allows Employer Services' processing services clients to enter payroll data via their microcomputers, then transmit the information to Employer Services for processing.

- Orchestrator also enables users to retrieve report and data files for ad hoc reporting or integration with popular software programs, including Lotus 1-2-3, dBase, and Microsoft Word, as well as PC-to-PC for consolidating departmental or multilocation information.
- An electronic timeclock interface to payroll is available through Orchestrator to facilitate automation from punch-in to paycheck.
- Two other features of Orchestrator, Xpresscheck™ and Xpressmaster™, enable customers to produce completely automated paychecks at their microcomputers—from calculating taxes and printing checks to updating the Signature payroll master files.
- HR-1® is an HR system that operates independently but can be interfaced to other applications and processes such as payroll.

Accent Plus™ Services are specialized consulting and customization services for organizations with complex human resources/payroll environments.

Payroll-related services are typically priced on a fee-per-item processed basis. Employer Services also derives a portion of its payroll tax filing revenue from interest income it receives on tax filing deposits temporarily held pending remittance on behalf of customers to taxing authorities. Hence these revenues vary as a result of changes in interest rates.

Employer Services has approximately 36,000 contracts with approximately 23,000 customers.

Clients

A sample of Employer Services' clients includes Unisys Corporation, Toys R Us and National Semiconductor Corporation.

Marketing and Sales

Employer Services markets its services through a direct sales force operating through more than 35 district offices. As of December 31, 1993, Employer Services had approximately 380 salespeople compared to approximately 300 sales people as of December 31, 1992.

- Employer Services has also established marketing relationships with banks and accounting firms.
- Employer Services markets its services by identifying customers that use or are contemplating using a third-party service provider. The most significant source of customer leads are referrals from existing customers and banks and accounting firms with which it has relationships. The company also identifies potential customers through newspaper articles, periodicals, trade publications and direct mailings.

Alliances

Employer Services has a partnership with Advisory Communications Systems, Inc. (ACS) to jointly market ACS' LawPhone legal services for small businesses.

Competitors

Employer Services' primary competitors in the payroll processing market are Automatic Data Processing (ADP) and Paychex.

Assessment

The company's strengths include:

- Industry-leading service and support
- The first "seamless", integrated payroll/human resources system

- Well-rounded offerings to help companies manage the employment relationship—payroll, HR, tax filing, employee assistance services and consulting

Challenges over the coming year include:

- Bringing new payroll and HR systems to market
- Implementing Windows and client/server technology
- Increasing profit margins

CERNER CORPORATION

2800 Rockcreek Parkway
Suite 601
Kansas City, MO 64117
Phone: (816) 221-1024
Fax: (816) 221-0179

Chairman & CEO:	Neal L. Patterson
President & COO:	Clifford W. Illig
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	653
Total Revenue:	\$101,145,000
Fiscal Year End:	12/31/92

Key Points

- Cerner's vision of health care computing is supported by its Healthcare Network Architecture (HNA), an information architecture with the patient as its major focus. HNA is designed to automate the patient care process for diagnosing and treating the patient's medical problems, both in the short and long term, across the inpatient, ambulatory, and community settings.
- Over the last several years, Cerner has invested in expanding its organization internationally. During 1992, international operations contributed \$5.8 million to revenue and \$3.8 million to gross profits, representing increases of 19% and 21% respectively over 1991.
- In order to develop stronger client relationships, Cerner has announced the regionalization of its client services organization and plans to open eight branch offices across the country.

**Company
Description**

Cerner Corporation, founded in 1980, develops, markets, and supports turnkey systems for use in the clinical departments of health care providers such as hospitals, clinics, HMOs, and reference laboratories. The company is a member of DEC's Cooperative Marketing Program.

Strategy

Cerner management believes that there are significant opportunities for a company that delivers products that provide integrated clinical information to medical professionals responsible for patient care.

Cerner's product strategy is to expand its information system offerings to the broad range of clinical departments and to provide a data base of integrated patient information useful to both the practitioner and the health care manager. In addition, Cerner's strategy is to design its products so that they may be easily modified or enhanced to take advantage of changes in medical and information system technologies.

To effect this strategy, Cerner has developed the Healthcare Network Architecture (HNA), which provides the structure and common software functions necessary for the development and interaction of all clinical information systems.

Financials

Cerner's 1992 revenue reached \$101.1 million, a 31% increase over 1991 revenue of \$77.2 million. Net income rose 111%, from \$4.7 million in 1991 to \$9.9 million in 1992. A five-year financial summary follows:

**CERNER CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	1992	1991	1990	1989	1988
Revenue	\$101.1	\$77.2	\$57.1	\$49.2	\$34.5
• Percent increase from previous year	31%	35%	16%	43%	5%
Income before taxes	\$16.3	\$7.6	\$4.2	\$3.9	\$3.5
• Percent increase (decrease) from previous year	114%	80%	9%	10%	(42%)
• Gross margin	16%	10%	7%	8%	10%
Net income	\$9.9	\$4.7	\$2.6	\$2.5	\$2.4
• Percent increase (decrease) from previous year	111%	78%	6%	4%	(33%)
• Net margin	10%	6%	5%	5%	7%
Earnings per share (a)	\$0.68	\$0.34	\$0.19	\$0.17	\$0.16
• Percent increase from previous year	100%	79%	12%	6%	(34%)

(a) Restated to reflect 2-for-1 stock splits in April 1992 and February 1993.

Cerner management attributes 1992 results to the following:

- Systems sales increased 32% to \$71.6 million. A significant amount of the 1992 system sales revenue was in the backlog at the beginning of the year, including portions of the four HNA contracts signed during 1991. One additional contract for the purchase of all HNA products to be installed over a two to three year period was signed in 1992 and contributed to 1992 revenue.
- Sales of additional hardware and software to the installed client base (included in system sales) increased 52%.
- During 1992, Cerner sold more PathNet systems than in any previous year. A significant number of these were in the standalone laboratory information system marketplace. Cerner also saw an increase in the sale of standalone pharmacy and radiology systems during the year.
- Cerner has seen a significant increase in the multi-Net buyer--a client who purchases two or more system units on their

initial contract or a client from the installed base who purchases one or more system units subsequent to their initial contract.

- Support and maintenance revenue increased 28% during 1992 due to an increase in the installed client base. The number of clients converted and paying monthly software support fees was 264 at the end of 1992, compared to 215 at the end of 1991, and 167 at the end of 1990. The number of clients installed and paying monthly hardware maintenance fees was 234 at the end of 1992, compared to 179 at the end of 1991, and 156 at the end of 1990.

Revenue for the three months ending March 31, 1993 reached \$24.1 million, a 20% increase over \$20.2 million for the same period in 1992. Net income rose 76% from \$1.5 million to \$2.6 million.

Employees

As of December 31, 1992, Cerner had 653 employees segmented as follows:

FUNCTION	NUMBER	PERCENT OF TOTAL
Sales and marketing	72	11%
Client services and support	290	44%
Product development	229	35%
General management and administration	62	10%
TOTAL	653	100%

Competitors

Competitors by application area include the following:

- In the clinical laboratory market, Cerner generally competes with Community Health Computing, Lab Force, and Sunquest Information Systems.
- In the respiratory care and pulmonary physiology markets, competitors include Puritan-Bennett Corporation and Tenet Information Systems.
- Multiproduct health care information systems competitors include 3M, Shared Medical Systems, HBO & Company, and First Data Corporation.

Key Products and Services

Approximately 71% of Cerner's 1992 revenue was derived from turnkey systems, 26% from software support and hardware maintenance services, and 3% from hardware sales to existing customers. The majority of revenue is derived from PathNet licenses and maintenance services.

A three-year summary of source of revenue follows:

**CERNER CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1992		1991		1990	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Turnkey systems	\$71.5	71%	\$54.1	70%	\$41.1	72%
Maintenance	26.7	26%	20.9	27%	14.2	25%
Other	2.9	3%	2.2	3%	1.8	3%
TOTAL	\$101.1	100%	\$77.2	100%	\$57.1	100%

Cerner's turnkey clinical information systems are designed to operate on DEC VAX computers. The company currently has over 270 customers in the U.S., Canada, Saudi Arabia, the U.K., Australia, and Singapore.

PathNet, the company's flagship product, is targeted to clinical laboratories. PathNet automates the ordering and reporting of procedures, the production of reports, and the maintenance of accessible clinical records.

- PathNet 300, introduced during the second quarter of 1988, is the upgrade of the company's PathNet Laboratory Information System and includes significant functional and technical enhancements to the product.
- PathNet addresses the information needs of five clinical departments: general laboratory, microbiology, blood bank transfusion services, blood bank donor services, and anatomic pathology.
- Additional HNA systems are available with PathNet, as with all of Cerner's major clinical systems, for management, commercial,

productivity, and decision support applications that assist clinicians in marketing their services and controlling their resources.

- As of December 1992, PathNet was licensed to 293 clients in the U.S. and Canada, 16 clients in the U.K., one client in Singapore, three clients in Saudi Arabia, and three clients in Australia. Installations are in hospitals ranging in size from approximately 70 to 1,650 beds.
- The price of a PathNet system generally ranges from \$100,000 to \$3.3 million per installation, including hardware.

The MedNet Pulmonary Medicine Information Systems product line, introduced in 1987, addresses the information processing needs of the medical-related service areas.

- The systems automate procedure requests, patient and therapist scheduling, and the processing, validation, and presentation of results. Reports on clinical activity, workload, and billing charges are provided by drawing from the departmental data bases.
- MedNet respiratory care and pulmonary physiology systems are currently available. As of December 1992, MedNet had been licensed to 10 clients in the U.S. and Canada.

The RadNet Radiology Information System, introduced in 1989, addresses the operational and management requirements of diagnostic radiation and radiation oncology departments.

- The system automates such tasks as scheduling patients, modifying orders, tracking patients, locating films, transcribing reports, upgrading the quality and content of reports, and productivity reporting.
- RadNet had been licensed to 26 clients in the U.S. and Canada and to three clients in Saudi Arabia as of December 31, 1992.

The PharmNet Pharmacy Information System, released commercially in 1989, supports the hospital-based pharmacy department. Daily pharmacy operations, clinical pharmacy support, and integration with other Cerner clinical information systems is provided. PharmNet has been licensed to 30 clients in the U.S. and Canada and three clients in Saudi Arabia as of December 31, 1992.

The ProNet Patient Information System, released in 1990, supports order entry, order review and/or validation, interdepartmental communications, and order and result inquiry and reporting.

- The system, which is driven by a comprehensive security matrix, also provides access to patient demographics, admissions, transfer, and discharge information.
- ProNet was licensed to eight clients in the U.S. and Canada as of December 31, 1992.

The CareNet Nursing Information System, introduced in 1990, automates documentation related to nursing care delivery within an institution. All information that nursing staff members enter into CareNet is automatically transcribed to all appropriate locations in the patient's medical record. As of December 31, 1992, CareNet had been licensed to six clients in the U.S. and Canada.

The Open Clinical Foundation Data Repository (OCF) clinical data system is a structured repository for clinical information. OCF was commercially introduced in 1992 and had been licensed to four Cerner clients in the U.S. as of December 31, 1992.

PowerChart gives health care providers structured access the clinical information contained electronically in the OCF.

- It enables care-providers to electronically view, sort, annotate, and amend a patient record using patient-provider and encounter relations. Clinicians are able to access documents, data, images, and voice in many formats, including flowsheets and graphs.
- PowerChart was commercially introduced in 1992 and had been licensed to three clients in the U.S. as of December 31, 1992.

Products under development include:

- The MRNet Medical Records Department Information System will address the operations management needs for chart tracking and completion tasks commonly associated with maintaining medical records.
- The SurgiNet Surgical Information System will address the needs of the surgical department, including automating scheduling, inventory management, and clinical information management.
- The Open Management Foundation Data Repository (OMF) is a structured repository for process and activity related information useful for management of the health care institution.
- PowerVision will be a PC-based executive information system.

Substantially all of Cerner's customers enter into hardware and software maintenance agreements with Cerner. In the majority of cases, Cerner subcontracts hardware maintenance to DEC. Each customer has 24-hour access to the customer support staff located at Cerner's headquarters.

Industry Markets

One hundred percent of Cerner's revenue is derived from the medical industry.

The market for Cerner's clinical information system products includes hospitals, HMOs, clinics, independent reference laboratories, and blood bank commercial labs. The majority of system sales to date have been in hospital-based provider settings. Cerner currently services hospitals ranging from under 100 to over 1,000 beds.

Clients currently using PathNet represent the primary target market for MedNet, RadNet, PharmNet, ProNet, CareNet, and OCF/PowerChart.

Geographic Markets

Approximately 94% of Cerner's 1992 revenue was derived from the U.S. and 6% from international sources. A three-year summary of geographic source of revenue follows:

**CERNER CORPORATION
THREE-YEAR GEOGRAPHICAL SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1992		1991		1990	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S. (a)	\$95.3	94%	\$72.3	94%	\$57.1	100%
International	5.8	6%	4.9	6%	—	—
TOTAL	\$101.1	100%	\$77.2	100%	\$57.1	100%

(a) Includes export sales of \$4.2 million, \$1.4 million, and \$2.8 million for 1992, 1991, and 1990, respectively.

In addition to its headquarters in Kansas City (MO), Cerner has service branch offices in Boston, Dallas, and Kansas City and subsidiaries in England and Australia. By the end of 1993, offices should be in place in Washington, D.C., Atlanta, Detroit, and Southern California.

Cerner is participating in a joint venture in the Kingdom of Saudi Arabia to sell Cerner products. Cerner also has clients in Germany, Scotland, the U.K., Canada, and Singapore.

**Computer
Hardware and
Software**

Cerner has various DEC VAX systems installed for research and development and customer support.

COMPANY PROFILE

CERNER CORPORATION

2800 Rockcreek Parkway
Suite 601
Kansas City, MO 64117
Phone: (816) 221-1024
Fax: (816) 221-0179

Neal L. Patterson, Chairman and CEO
Clifford W. Illig, President and COO
Public Corporation, NASDAQ
Total Employees: 505
Total Revenue, Fiscal Year End
12/31/91: \$77,240,000

The Company

Cerner Corporation, founded in 1980, develops, markets, and supports turnkey systems for use in the clinical departments of health care providers such as hospitals, clinics, HMOs, and reference laboratories. The company is a member of DEC's Cooperative Marketing Program.

Cerner management believes that there are significant opportunities for a company that delivers products that provide integrated clinical information to medical professionals responsible for patient care.

- To address these needs, Cerner has developed the Healthcare Network Architecture (HNA), which provides the structure and common software functions necessary for the development and interaction of all clinical information systems.
- Cerner's growth strategy is to continue to penetrate the Laboratory Information Systems (LIS) market with its PathNet products, the Radiology Information Systems (RIS) market with the RadNet products, and the Pharmacy Information Systems (RxIS) market with the PharmNet products, while systematically adding clinical products that serve as building blocks within HNA.

During 1991, Cerner expanded its operations in the international market, completing an agreement with McDonnell Douglas Information Systems Ltd. and the Northwest Thames Regional Health Authority in London to provide support to sixteen PathNet clients, as well as initiate new standalone system sales in the U.K.

- The agreement supersedes a 1986 agreement between Cerner and McDonnell Douglas that had granted certain exclusive marketing rights for PathNet to McDonnell Douglas.

- During the year, Cerner also reached an agreement to install PathNet in the largest health care institution in Saudi Arabia.
- Cerner also formed a subsidiary in Australia to install and support laboratory systems at pilot sites in two hospitals for a large contract with the government of New South Wales. Once the successful installation of the pilot sites is complete, Cerner expects to install the PathNet System in a number of the remaining 60 hospitals operated by the New South Wales Health Department.

Cerner's 1991 revenue reached \$77.2 million, a 35% increase over 1990 revenue of \$57.1 million. Net income rose 78%, from \$2.6 million in 1990 to \$4.7 million in 1991.

- During 1991, Cerner changed its method of accounting for software revenue pursuant to the provisions of SOP 91-1. In the five-year summary that follows, financials prior to 1991 have been restated to reflect this change in the method of accounting.

**CERNER CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR				
	1991	1990	1989	1988	1987
Revenue	\$77,240	\$57,110	\$49,152	\$34,482	\$32,868
• Percent increase (decrease) from previous year	35%	16%	43%	5%	N/A
Income before taxes	\$7,552	\$4,185	\$3,850	\$3,506	\$6,094
• Percent increase (decrease) from previous year	80%	9%	10%	(42%)	N/A
• Gross margin	10%	7%	8%	10%	19%
Net income	\$4,688	\$2,636	\$2,482	\$2,382	\$3,575
• Percent increase (decrease) from previous year	78%	6%	4%	(33%)	N/A
• Net margin	6%	5%	5%	7%	11%
Earnings per share	\$1.36	\$0.76	\$0.66	\$0.63	\$0.96
• Percent increase (decrease) from previous year	79%	15%	5%	(34%)	N/A

During 1991, Cerner had its best selling year since its inception as both system placement and contract values increased.

- Cerner signed contracts during 1991 with a value of \$61.5 million, a significant increase over prior years. Contracts signed in 1991 included five large contracts for the purchase of all HNA products to be installed over a two- to three-year period. These contracts represent the company's first placements of hospital-wide clinical applications.
- During 1991, Cerner also signed a contract with the Kaiser Permanente Northern California Region to provide laboratory information systems for 15 medical center and 16 medical office building laboratories. The value of the agreement is expected to be in the range of \$12 million to \$13 million.
- Also during 1991, Cerner reached an agreement with the Oklahoma Healthcare Corporation's Baptist Medical Center in Oklahoma City to implement the full suite of Cerner's HNA clinical software products, with completion scheduled for 1994. The value of the agreement is expected to exceed \$10 million.
- During the last half of 1991, Cerner began to see a recovery in the standalone laboratory marketplace. Also during the year, the company expects to see more of a contribution from the sale of standalone pharmacy and radiology systems and increased sales of add-on hardware and software to the installed customer base.

As of December 31, 1991, Cerner had 505 employees (generating approximately \$152,950 in revenue per employee), segmented as follows:

FUNCTION	NUMBER	PERCENT OF TOTAL
Sales and marketing	59	12%
Client services and support	237	47%
Product development	156	31%
General management and administration	53	10%
TOTAL	505	100%

Competitors by application area include the following:

- In the clinical laboratory market, Cerner generally competes with Community Health Computing, Lab Force, and Sunquest Information Systems.

- In the respiratory care and pulmonary physiology markets, competitors include Puritan-Bennett Corporation and Tenet Information Systems.
- Multiproduct health care information systems competitors include 3M, Shared Medical Systems, HBO & Company, and American Express.

Key Products and Services

Approximately 70% of Cerner's 1991 revenue was derived from turnkey systems, 27% from software support and hardware maintenance services, and 3% from hardware sales to existing customers. The majority of revenue is derived from PathNet licenses and maintenance services.

A three-year summary of source of revenue follows:

CERNER CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
 (\$ millions)

ITEM	FISCAL YEAR					
	1991		1990		1989	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Turnkey systems	\$54.1	70%	\$41.1	72%	\$38.0	77%
Maintenance	20.9	27%	14.2	25%	9.1	19%
Other	2.2	3%	1.8	3%	2.1	4%
TOTAL	\$77.2	100%	\$57.1	100%	\$49.2	100%

Cerner's turnkey clinical information systems are designed to operate on DEC VAX computers. The company currently has over 270 customers in the U.S., Canada, Saudi Arabia, the U.K., Australia, and Singapore.

PathNet, the company's flagship product, is targeted to clinical laboratories. PathNet automates the ordering and reporting of procedures, the production of reports, and the maintenance of accessible clinical records.

- PathNet 300, introduced during the second quarter of 1988, is the upgrade of the company's PathNet Laboratory Information

System and includes significant functional and technical enhancements to the product.

- PathNet addresses the information needs of five clinical departments: general laboratory, microbiology, blood bank transfusion services, blood bank donor services, and anatomic pathology.
- Additional HNA systems are available with PathNet, as with all of Cerner's major clinical systems, for management, commercial, productivity, and decision support applications that assist clinicians in marketing their services and controlling their resources.
- As of December 1991, PathNet was licensed to 246 clients in the U.S. and Canada, 15 clients in the U.K., one client in Singapore, one client in Saudi Arabia, and two clients in Australia. Installations are in hospitals ranging in size from approximately 70 to 1,650 beds.
- The price of a PathNet system generally ranges from \$100,000 to \$3.3 million per installation, including hardware.

The MedNet Information Systems product line, introduced in 1987, addresses the information processing needs of the medical-related service areas.

- The systems automate procedure requests, patient and therapist scheduling, and the processing, validation, and presentation of results. Reports on clinical activity, workload, and billing charges are provided by drawing from the departmental data bases.
- MedNet's respiratory care and pulmonary physiology systems are currently available. As of December 1991, a total of nine institutions had systems installed in the U.S. and Canada.

The RadNet Radiology Information System, introduced in 1989, addresses the operational and management requirements of diagnostic radiation and radiation oncology departments.

- The system supports patient scheduling, modifying orders, tracking patients, locating films, transcribing reports, upgrading the quality and content of reports, and productivity reporting.
- RadNet had been installed in 16 institutions in the U.S. and Canada as of December 31, 1991.

The PharmNet Pharmacy Information System, released commercially in 1989, supports the hospital-based pharmacy department. Daily pharmacy operations, clinical pharmacy support, and integration with other Cerner clinical information systems is provided. PharmNet had been installed in 15 institutions in the U.S. and Canada as of December 31, 1991.

The ProNet Patient Information System, released in 1990, supports order entry, order review and/or validation, interdepartmental communications, and order and result inquiry and reporting.

- The system, which is driven by a comprehensive security matrix, also provides access to patient demographics, admissions, transfer, and discharge information.
- ProNet was licensed to six clients in the U.S. and Canada as of December 31, 1991.

The CareNet Nursing Information System, introduced in 1990, automates documentation related to nursing care delivery within an institution. All information that nursing staff members enter into CareNet is automatically transcribed to all appropriate locations in the patient's medical record. As of December 31, 1991, CareNet had been licensed to five clients in the U.S. and Canada.

Products under development include:

- The Open Clinical Foundation Data Repository (OCF) clinical data system will be a structured repository of clinical information and will form the foundation of Cerner's Electronic Medical Record functionality.
- PowerChart will permit structured access to patient clinical information in OCF.
- The MRNet Medical Records Department Information System will address the operations management needs for chart tracking and completion tasks commonly associated with maintaining medical records.
- PowerVision will be a PC-based executive information system.

Substantially all of Cerner's customers enter into hardware and software maintenance agreements with Cerner. In the majority of cases, Cerner subcontracts hardware maintenance to DEC. Each customer has 24-hour access to the customer support staff located at Cerner's headquarters.

Industry Markets

One hundred percent of Cerner's revenue is derived from the medical industry.

The market for Cerner's clinical information system products includes hospitals, HMOs, clinics, independent reference laboratories, and blood bank commercial labs. The majority of system sales to date have been in hospital-based provider settings. Cerner currently services hospitals ranging from under 100 to over 1,000 beds.

Clients currently using PathNet represent the primary target market for MedNet, RadNet, PharmNet, ProNet, and CareNet.

Geographic Markets

Approximately 94% of Cerner's 1991 revenue was derived from the U.S. and 6% from international sources. A three-year summary of geographic source of revenue follows:

CERNER CORPORATION
THREE-YEAR GEOGRAPHICAL SOURCE OF REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR					
	1991		1990		1989	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$72.3	94%	\$57.1	100%	\$49.2	100%
International	4.9	6%	--	--	--	--
TOTAL	\$77.2	100%	\$57.1	100%	\$49.2	100%

In addition to its headquarters in Kansas City (MO), Cerner has an office in Boston and subsidiaries in England and Australia.

During 1991, Cerner completed an agreement with McDonnell Douglas Information Systems Ltd. and the Northwest Thames Regional Health Authority in London for Cerner to provide support to 16 PathNet clients, as well as initiate new standalone system sales in the U.K.

Computer Hardware and Software

Cerner has various DEC VAX systems installed for research and development and customer support.

COMPANY PROFILE

CERNER CORPORATION

2800 Rockcreek Parkway
Suite 601
Kansas City, MO 64117
(816) 221-1024

Neal L. Patterson, Chairman and CEO
Clifford W. Illig, President and COO
Public Corporation, NASDAQ
Total Employees: 428
Total Revenue, Fiscal Year End
12/31/90: \$51,253,000

The Company

Cerner Corporation, founded in 1980, develops, markets, and supports turnkey systems for use in the clinical departments of health care providers such as hospitals, clinics, HMOs, and reference laboratories. The company is a member of DEC's Cooperative Marketing Program.

Cerner management believes that there are significant opportunities for a company that delivers products that provide integrated clinical information to medical professionals responsible for patient care.

- To address these needs, Cerner has developed the Healthcare Network Architecture (HNA), which provides the structure and common software functions necessary for the development and interaction of additional clinical information systems.
- Cerner's growth strategy is to continue to penetrate the Laboratory Information Systems (LIS) market with its PathNet products while systematically adding additional clinical products which serve as building blocks with HNA.

Revenue for the three months ending March 31, 1991 reached \$14.9 million, a 65% increase over \$9.1 million for the same period in 1990. Net income was \$430,000, compared to net losses of \$359,000 for the same period a year ago.

- Cerner management states that overall, the market for laboratory systems continues to show little growth in the U.S., but recurring revenues from the company's installed base of clients and the sale of add-on and new major products to this base continues to grow.
- During the quarter, Cerner signed a contract with the Kaiser Permanente Northern California Region to provide laboratory information systems for 15 medical center and 16 medical office

building laboratories. The value of the agreement is expected to be in the range of \$12 to \$13 million.

- Also during the quarter, Cerner reached an agreement with the Oklahoma Healthcare Corporation's Baptist Medical Center in Oklahoma City to implement the full suite of Cerner's HNA clinical software products, with completion scheduled for 1994. The value of the agreement is expected to exceed \$10 million.

Cerner's 1990 revenue was \$51.3 million, a 10% decrease from 1989 revenue of \$56.7 million. Net income declined 56%, from \$3.6 million in 1989 to \$1.6 million in 1990. A five-year financial summary follows:

**CERNER CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR					
	1990	1989	1988	1987	1986	CAGR
Revenue	\$51,253	\$56,706	\$40,925	\$33,595	\$17,356	31%
• Percent increase (decrease) from previous year	(10%)	39%	22%	94%	68%	
Income before taxes	\$2,469	\$5,576	\$5,151	\$6,856	\$2,426	--
• Percent increase (decrease) from previous year	(56%)	8%	(25%)	183%	243%	
• Gross margin	5%	10%	13%	20%	14%	
Net income	\$1,555	\$3,569	\$3,426	\$4,024	\$2,291	--
• Percent increase (decrease) from previous year	(56%)	4%	(15%)	76%	224%	
• Net margin	3%	6%	8%	12%	13%	
Earnings per share	\$0.45	\$0.95	\$0.91	\$1.08	\$0.80	--
• Percent increase (decrease) from previous year	(53%)	4%	(16%)	35%	208%	

Cerner management attributes the revenue decline in 1990 to a decrease in the number of standalone placements of PathNet to hospital laboratory clients. The market for hospital-based laboratory information systems did not grow in 1990 and an increased percent of those purchasing systems did not choose a standalone system.

- Results were also attributed to a decrease in equipment revenues due to a larger number of software-only sales.
- Cerner's long-term commitment to building an integrated suite of clinical information products also affected the company's 1990 financial performance. Over the past three years, Cerner has spent approximately \$17.5 million in product research and development. Installation and support organizations also have been established in advance of revenue from new products.

As of December 31, 1990, Cerner had 428 employees (generating approximately \$119,750 in revenue per employee), segmented as follows:

FUNCTION	NUMBER	PERCENT OF TOTAL
Sales and marketing	44	10%
Client services and support	199	47%
Product development	133	31%
General management and administration	52	12%
TOTAL	428	100%

Competitors by application area include the following:

- In the clinical laboratory, Cerner generally competes with Community Health Computing, Lab Force, and Sunquest Information Systems.
- In the respiratory care and pulmonary physiology markets, competitors include Puritan-Bennett Corporation and Tenet Information Systems.
- Multiproduct health care information systems competitors include 3M, Shared Medical Systems, HBO & Company, and American Express.

Key Products and Services

Approximately 69% of Cerner's 1990 revenue was derived from turnkey systems, 28% from software support and hardware maintenance services, and 3% from hardware sales to existing customers. The majority of revenue is derived from PathNet licenses and maintenance services.

A three-year summary of source of revenue follows:

**CERNER CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1990		1989		1988	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Turnkey systems	\$35.3	69%	\$45.5	80%	\$35.3	86%
Maintenance	14.2	28%	9.1	16%	5.0	12%
Other	1.8	3%	2.1	4%	0.6	2%
TOTAL	\$51.3	100%	\$56.7	100%	\$40.9	100%

Cerner's turnkey clinical information systems are designed to operate on DEC VAX computers. The company currently has over 215 systems installed in the U.S. and Canada.

PathNet, the company's flagship product, is targeted to clinical laboratories. PathNet automates the ordering and reporting of procedures, the production of reports, and the maintenance of accessible clinical records.

- PathNet 300, introduced during the second quarter of 1988, is the upgrade of the company's PathNet Laboratory Information System and includes significant functional and technical enhancements to the product.
- PathNet addresses the information needs of five clinical departments: general laboratory, microbiology, blood bank transfusion services, blood bank donor services, and anatomic pathology.
- Additional systems are available with PathNet for management, commercial, productivity, and decision support applications that assist clinicians in marketing their services and controlling their resources.
- As of December 1990, PathNet was installed in 215 health care provider facilities in the U.S. and Canada, compared to 201 as of December 1989 and 147 as of December 1988. Installations are in hospitals ranging in size from approximately 70 to 1,650 beds.

- The price of a PathNet system generally ranges from \$100,000 to \$3.3 million per installation, including hardware.

The MedNet Information Systems product line, introduced in 1987, addresses the information processing needs of the medical-related service areas.

- The systems automate procedure requests, patient and therapist scheduling, and the processing, validation, and presentation of results. Reports on clinical activity, workload, and billing charges are provided by drawing from the departmental data bases.
- MedNet's respiratory care and pulmonary physiology systems are currently available. As of December 1990, a total of six institutions had systems installed.

The RadNet Radiology Information System, introduced in 1989, addresses the operational and management requirements of diagnostic radiation and radiation oncology departments.

- The system supports patient scheduling, modifying orders, tracking patients, locating films, transcribing reports, upgrading the quality and content of reports, and productivity reporting.
- RadNet has been installed in nine institutions as of December 31, 1990.

The PharmNet Pharmacy Information System, released commercially in 1989, supports the hospital-based pharmacy department. Daily pharmacy operations, clinical pharmacy support, and integration to other Cerner clinical information systems is provided. PharmNet has been installed in five institutions in the U.S. and Canada as of December 31, 1990.

Products under development include:

- The CareNet Nursing Information System, which will support hospital and ambulatory care (outpatient) nursing staff
- The ProNet Order Communications System, which will address the needs of inpatient and ambulatory care staff in the areas of patient demographics, patient admission, transfer and discharge, order entry, order review, order communication, and status and result update, inquiry, and reporting

Substantially all of Cerner's customers enter into hardware and software maintenance agreements with Cerner. In the majority of

cases, Cerner subcontracts hardware maintenance to DEC. Each customer has 24-hour access to the customer support staff located at Cerner's headquarters.

Industry Markets

One hundred percent of Cerner's revenue is derived from the medical industry.

The market for PathNet consists primarily of hospital-based laboratories, independent reference laboratories, and blood bank commercial labs. The majority of PathNet sales to date have been to hospital-based laboratories.

The market for MedNet consists primarily of hospitals. PathNet clients represent the primary target market for MedNet.

Since June 1986, Cerner has had a marketing agreement with McDonnell Douglas Corporation (MDC) under which MDC was granted certain exclusive and nonexclusive rights to market PathNet on a private-label basis for \$2 million plus royalties.

- In September 1989, MDC, subsequent to the sale of its domestic health care systems business to American Express, notified Cerner it would be discontinuing its exclusive marketing rights, effective March 1991.
- Domestically, 21 sites have been licensed to use Cerner software under the MDC arrangement. Cerner, American Express, and the clients are cooperating to transfer ongoing responsibility for remaining installation and software support services to Cerner.
- Royalty payments from MDC to Cerner were approximately \$526,000 in 1989, \$129,000 in 1988, and \$84,000 in 1987. During 1990, Cerner recognized revenue for installation fees, support fees, and additional equipment related to former MDC sublicensees of approximately \$1.8 million.

Geographic Markets

Approximately 95% of Cerner's 1990 revenue was derived from sales in the U.S., with the remaining 5% coming from Canada. A three-year summary of geographic source of revenue follows:

**CERNER CORPORATION
THREE-YEAR GEOGRAPHICAL SOURCE OF REVENUE SUMMARY
(\$ millions)**

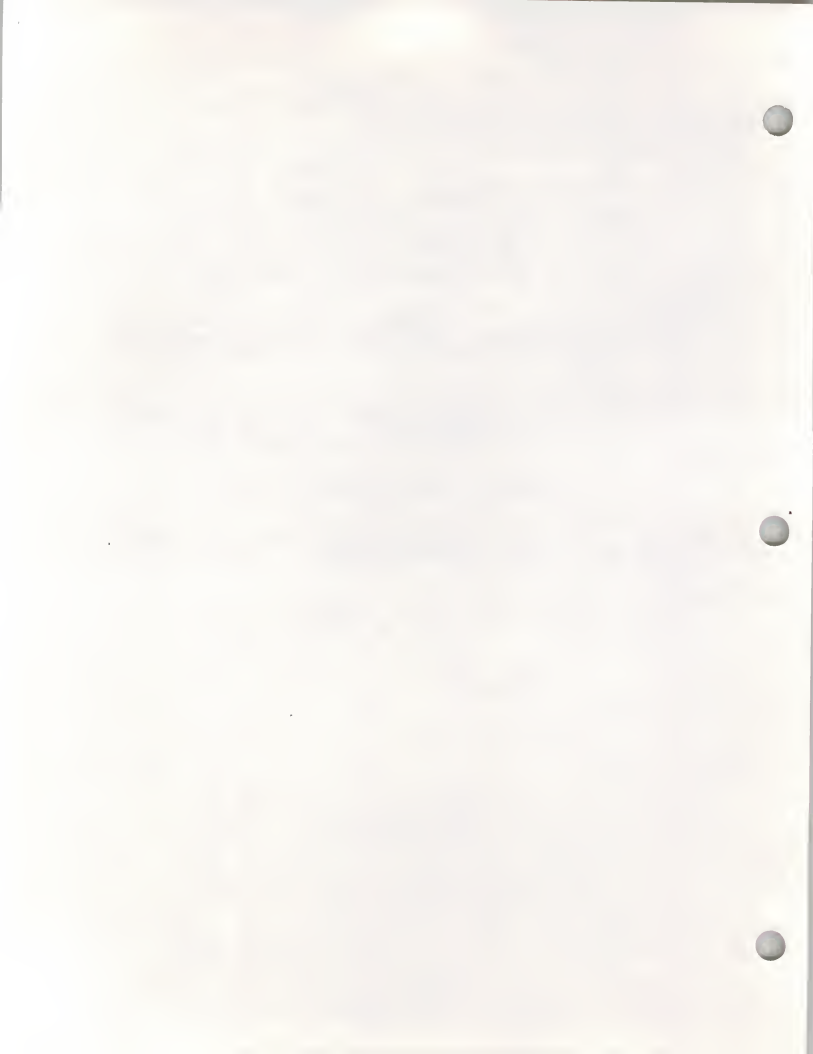
ITEM	FISCAL YEAR					
	1990		1989		1988	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$48.6	95%	\$56.3	99%	\$39.8	97%
Canada	2.7	5%	0.4	1%	1.1	3%
TOTAL	\$51.3	100%	\$56.7	100%	\$40.9	100%

Cerner has also assumed the contracts from McDonnell Douglas for 17 PathNet sites in England and will use this base to market PathNet and other Cerner products throughout the U.K.

The company is also selling its PathNet product in Australia.

**Computer
Hardware and
Software**

Cerner has various DEC VAX systems installed for research and development and customer support.



COMPANY PROFILE

CERNER CORPORATION

2800 Rockcreek Parkway
Suite 601
Kansas City, MO 64117
(816) 221-1024

Neal L. Patterson, Chairman and CEO
Clifford W. Illig, President and COO
Public Corporation, NASDAQ
Total Employees: 361
Total Revenue, Fiscal Year End
12/31/89: \$56,706,000

The Company

Cerner Corporation, founded in 1980, develops, markets, and supports turnkey systems for use in the clinical departments of health care providers such as hospitals, clinics, HMOs, and reference laboratories. The company is a member of DEC's Cooperative Marketing Program.

Cerner's product strategy is to expand its information system offerings to a range of clinical departments and provide a data base of integrated patient information useful to both the practitioner and the health care manager. In addition, the company's strategy is to design its products so that they may be easily modified or enhanced to take advantage of changes in medical and information system technologies.

Cerner's 1989 revenue reached \$56.7 million, a 39% increase over 1988 revenue of \$40.9 million. Net income rose 4%, from \$3.4 million in 1988 to nearly \$3.6 million in 1989. A five-year financial summary follows:

**CERNER CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR					
	1989	1988	1987	1986	1985	CAGR
Revenue	\$56,706	\$40,925	\$33,595	\$17,356	\$10,341	53%
• Percent increase (decrease) from previous year	39%	22%	94%	68%	433%	
Income before taxes	\$5,576	\$5,151	\$6,856	\$2,426	\$708	68%
• Percent increase (decrease) from previous year	8%	(25%)	183%	243%	145%	
• Gross margin	10%	13%	20%	14%	7%	
Net income	\$3,569	\$3,426	\$4,024	\$2,291	\$708	50%
• Percent increase (decrease) from previous year	4%	(15%)	76%	224%	145%	
• Net margin	6%	8%	12%	13%	7%	
Earnings per share	\$0.95	\$0.91	\$1.08	\$0.80	\$0.26	38%
• Percent increase (decrease) from previous year	4%	(16%)	35%	208%	135%	

Cerner completed 45 contracts during 1989, increasing to over 200 the number of sites for its systems.

- By the end of 1989, PathNet 300, the upgrade of the company's flagship PathNet Laboratory Information System, was installed at 92 sites, including 17 which were converted from the prior version.

Although 1988 showed rapid growth in sales, increasing by 22% from \$33.5 million in 1987 to \$40.9 million in 1988, net earnings decreased by 15%. Contributing to the company's difficulties were delays in the release of PathNet 300 and disproportionate costs incurred while converting clients' systems to the new PathNet product. At the end of 1988, Cerner had 26 sites using PathNet 300.

Revenue for the three months ending March 31, 1990 was \$9.1 million, a 32% decrease from revenue of \$13.3 million for the same period in 1989. Net losses were \$359,000 compared to net income of \$483,000 for the same period a year ago. Results were attributed to Cerner not completing three large contracts during the quarter.

As of December 31, 1989, Cerner had 361 employees (generating approximately \$157,000 in revenue per employee), segmented as follows:

FUNCTION	NUMBER	PERCENT OF TOTAL
Sales and marketing	42	12%
Client services and support	161	45%
Product development	106	29%
General management and administration	52	14%
TOTAL	361	100%

Competitors by application area include the following:

- In the clinical laboratory, Cerner generally competes with Community Health Computing, Lab Force, and Sunquest Information Systems.
- In the respiratory care and pulmonary physiology markets, competitors include Puritan-Bennett Corporation and Tenet Information Systems.
- Multiproduct health care information systems competitors include 3M, Shared Medical Systems, HBO & Company, and American Express.

Key Products and Services

Approximately 80% of Cerner's 1989 revenue was derived from turnkey systems, 16% from software support and hardware maintenance services, and 4% from hardware sales to existing customers. The majority of revenue is derived from PathNet licenses and maintenance services.

A three-year summary of source of revenue follows:

**CERNER CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1989		1988		1987	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Turnkey systems	\$45.5	80%	\$35.3	86%	\$30.2	90%
Maintenance	9.1	16%	5.0	12%	2.8	8%
Other	2.1	4%	0.6	2%	0.6	2%
TOTAL	\$56.7	100%	\$40.9	100%	\$33.6	100%

Cerner's turnkey clinical information systems are designed to operate on DEC VAX computers. The company currently has over 200 systems installed in the U.S. and Canada.

- Cerner has developed a proprietary Healthcare Network Architecture (HNA) which provides the structure and common software functions necessary for the development of its clinical information systems.

PathNet, the company's flagship product, is targeted to clinical laboratories. PathNet automates the ordering and reporting of procedures, the production of reports, and the maintenance of accessible clinical records.

- During the second quarter of 1988, Cerner released PathNet 300, which includes significant functional and technical enhancements to the product.
- The PathNet Laboratory Information System addresses the information needs of five clinical departments: general laboratory, microbiology, blood bank transfusion services, blood bank donor services, and anatomical pathology.
- Additional systems are available with PathNet for management, commercial, productivity, and decision support applications that assist clinicians in marketing their services and controlling their resources.
- As of December 1989, PathNet was installed in 201 health care

provider facilities in the U.S. and Canada, compared to 147 as of December 1988. Installations are in hospitals ranging in size from approximately 70 to 1,650 beds.

- The price of a PathNet system generally ranges from \$100,000 to \$3.3 million per installation, including hardware.

The MedNet Information Systems (MedNet) product line, introduced in 1987, addresses the information processing needs of the medical-related service areas.

- The systems automate procedure requests, patient and therapist scheduling, and the processing, validation, and presentation of results. Reports on clinical activity, workload, and billing charges are provided by drawing from the departmental data bases.
- MedNet respiratory care and pulmonary physiology systems are currently available. As of December 1989, a total of six institutions had systems installed.

The RadNet Radiology Information System, introduced in 1989, is an integrated system that addresses the therapeutic and diagnostic information processing needs of the radiology department. RadNet was installed in one institution during 1989.

The PharmNet Pharmacy Information System, released commercially in 1989, supports the hospital-based pharmacy department. Daily pharmacy operations, clinical pharmacy support, and integration to other Cerner clinical information systems is provided.

Products under development include:

- The CareNet Nursing Information System
- The ProNet Order Communications System

Substantially all of Cerner's customers enter into hardware and software maintenance agreements with Cerner. In the majority of cases, Cerner subcontracts hardware maintenance to DEC. Each customer has 24-hour access to the customer support staff located at Cerner's headquarters.

Industry Markets

One hundred percent of Cerner's revenue is derived from the medical industry.

The market for PathNet consists primarily of hospital-based laboratories, independent reference laboratories, and blood banks. The majority of PathNet sales to date have been to hospital-based laboratories.

The market for MedNet consists primarily of hospitals. PathNet clients represent the primary target market for MedNet.

Since June 1986, Cerner has had a marketing agreement with McDonnell Douglas Corporation (MDC) under which MDC was granted certain exclusive and nonexclusive rights to market PathNet on a private-label basis for \$2 million plus royalties.

- In September 1989, MDC, subsequent to the sale of its domestic health care systems business to American Express, notified Cerner it would be discontinuing its exclusive marketing rights, effective March 1991.
- Domestically, 21 sites have been licensed to use Cerner software under the MDC arrangement. Cerner, American Express, and the clients are cooperating to transfer ongoing responsibility for remaining installation and software support services to Cerner.
- Royalty payments from MDC to Cerner were approximately \$526,000 in 1989, \$129,000 in 1988, and \$84,000 in 1987.

Geographic Markets

Approximately 99% of Cerner's 1989 revenue was derived from sales in the U.S., with the remaining 1% coming from Canada. A three-year summary of geographic source of revenue follows:

**CERNER CORPORATION
THREE-YEAR GEOGRAPHICAL SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	1989		1988		1987	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$56.3	99%	\$39.8	97%	\$32.8	98%
Canada	0.4	1%	1.1	3%	0.8	2%
TOTAL	\$56.7	100%	\$40.9	100%	\$33.6	100%

**Computer
Hardware and
Software**

Cerner has various DEC VAX systems installed for research and development and customer support.

COMPANY PROFILE

CERNER CORPORATION
2800 Rockcreek Parkway
Suite 601
North Kansas City, MO 64117
(816) 221-1024

Neal L. Patterson, Chairman and
President
Public Corporation, OTC
Total Employees: 161
Total Revenue, Fiscal Year End
12/31/86: \$17,356,000

THE COMPANY

- Cerner Corporation develops, markets, and supports turnkey systems to the health care industry for use in clinical departments. Clients include hospitals, health maintenance organizations (HMOS), and reference laboratories.
 - Cerner was incorporated in 1980 to provide information systems and related consulting services to the health care industry. From 1980 through 1983, the company's revenues were generated primarily by its consulting services, although a significant portion of its expenses were for the development of its initial product, PathNet.
 - PathNet was installed in several pilot sites during 1982 and 1983 and was first commercially marketed in May 1984.
- In December 1986 Cerner made an initial public offering of over one million shares of common stock of which 885,000 were sold by the company, and 200,000 were sold by selling stockholders. Net proceeds to the company, estimated at approximately \$12.6 million, will be used for general corporate purposes including product development.
- Cerner's 1986 revenue reached \$17.4 million, a 68% increase over 1985 revenue of \$10.3 million. Net income rose 224%, from \$708,000 in 1985 to \$2.3 million in 1986. A five-year financial summary follows:

CERNER CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1986	1985	1984	1983	1982
Revenue	\$ 17,356	\$ 10,341	\$ 1,939	\$ 1,373	\$ 1,237
• Percent increase from previous year	68%	433%	41%	11%	137%
Income (loss) before taxes	\$ 2,426	\$ 708	\$ (1,576)	\$ (715)	\$ (107)
• Percent increase from previous year	243%	145%	120%	568%	-
Net income (loss)	\$ 2,291(a)	\$ 708(a)	\$ (1,576)	\$ (715)	\$ (107)
• Percent increase from previous year	224%	145%	120%	568%	-
Earnings (loss) per share	\$ 0.80	\$ 0.26	\$ (0.74)	\$ (0.43)	\$ (0.07)
• Percent increase from previous year	208%	135%	72%	514%	-

(a) Includes a net operating loss carryforward of \$835,000 and \$153,000 for 1986 and 1985, respectively.

- Research and development expenditures were approximately \$1.6 million (9% of revenue) in 1986, \$1 million (10% of revenue) in 1985, and \$572,000 (29% of revenue) in 1984.
- Revenue for the three months ending March 31, 1987 reached \$5.6 million, compared to \$794,000 for the same period in 1986. Net income was \$654,000, compared to net losses of \$805,000 for the same period a year ago.

- As of December 31, 1986, Cerner had 161 employees, segmented as follows:

Sales and marketing	29
Client services and support	58
Product development	47
General management and administration	<u>27</u>
	161

- The company currently has about 175 employees.
- Major competitors include Community Health Computing, Lab Force, Rubicon, Sunquest Information Systems, SysteMed, Shared Medical Systems, and HBO & Company.

KEY PRODUCTS AND SERVICES

- Approximately 92% of Cerner's 1986 revenue was derived from turnkey systems, 8% from software support and hardware maintenance services. Professional services revenue decreased to less than 1% of revenue in 1986 and is expected to remain at that level in the future. A three-year summary of source of revenue follows (\$ thousands):

FISCAL YEAR ITEM	1986		1985		1984	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Turnkey systems	\$15,967	92%	\$ 9,673	94%	\$1,555	80%
Software support and hardware maintenance	1,322	8	431	4	106	6
Professional services	67	-	237	2	278	14
Total	\$17,356	100%	\$ 10,341	100%	\$1,939	100%

- The PathNet product line is a family of five categories of information systems: Laboratory, Common Clinical, Management, Commercial, and Advanced Laboratory Information Systems. Each of these categories address a different set of customer needs and can be combined as necessary for the customer's individual functional and budgetary requirements.
 - PathNet is based on DEC VAX or Texas Instruments minicomputers. Pricing ranges from \$100,000 to \$3.3 million per installation.
 - PathNet performs the following functions:
 - Processes and schedules test requests from physicians and tracks the flow of events within the laboratory departments.
 - Collects and validates test results and interpretations thereof.
 - Organizes the data from all procedures for optimum presentation to the physician.
 - Provides for quality control and quality assurance over the entire process.
 - Maintains the clinical information for short-term and long-term storage and retrieval.

- Creates management information measuring costs, employee productivity, and resource utilization.
- Communicates clinical information to patient care areas and to the healthcare provider's other data processing facilities.
- PathNet applications include the following:

	<u>Product</u>	<u>Release Date</u>
•	Laboratory Information Systems	
-	General Laboratory	1982
-	Microbiology	1983
-	Blood Bank Transfusion	1985
-	Blood Bank Donor	1986
-	Anatomical Pathology	1986
•	Common Clinical Systems	
-	Patient Chart	1982
-	Medical Abstract	1985
-	Infection Control	1986
-	Quality Control	1984
-	Automated Instruments	1982
•	Management Information Systems	
-	Cost Accounting	1986
-	Utilization Reporting	1986
-	Labor Productivity Reporting	1984
-	PathWriter	1986
-	Service Level Analysis	*
-	DRG Analysis	*
-	Inventory Control	*
•	Commercial Information Systems	
-	Client Accounting	1985
-	Marketing Analysis	1986
-	Profitability Analysis	1986
-	Operations Control	*
-	Data Communications Management	1985
•	Advanced Information Systems	
-	Expert	*
-	Resource Management	*

*Under development

- As of December 31, 1986, Cerner had issued end-user licenses for PathNet to 48 customers in the U.S. and Canada.

CERNER CORPORATION

- A second clinical product line is currently under development that addresses the needs of the respiratory therapy and pulmonary function departments. Cerner has also formed a Knowledge Systems Group to develop a product line that will use current and future artificial intelligence technology.
- Substantially all of Cerner's customers enter into hardware and software maintenance arrangements with Cerner. These arrangements normally provide for a fixed monthly fee for specified services. Each customer has 24-hour access to the customer support staff located at Cerner's corporate headquarters. In most cases, Cerner subcontracts hardware maintenance to the hardware manufacturer.

INDUSTRY MARKETS

- One hundred percent of Cerner's revenue is derived from the medical industry.
- The market for PathNet consists primarily of hospital-based laboratories, clinical laboratories associated with HMO's and other providers, independent reference laboratories, and blood banks. Most of the PathNet sales to date have been to hospital-based laboratories. PathNet is designed to address the requirements of facilities ranging in size from approximately 100 beds to over 2,000 beds.
- Cerner markets its systems through both direct sales and indirect channels.
 - In June 1986, Cerner entered into a marketing agreement with McDonnell-Douglas, which granted to McDonnell-Douglas a perpetual license to market PathNet on a non-exclusive private label basis. The agreement also grants to McDonnell-Douglas the exclusive right for five years to market PathNet to any organization outside of the U.S., Puerto Rico, and Canada, to hospitals owned or operated by the Department of Defense or the Veterans Administration, and to certain McDonnell-Douglas customers. The company entered into the McDonnell-Douglas marketing agreement primarily to gain access to the international and U.S. government markets without expending substantial company resources and secondarily to gain a broader access to the U.S. market. During 1986 Cerner recognized \$1.5 million as system sales revenue for products delivered and services rendered under this agreement.
 - During August 1986, Cerner was selected as a member of DEC's System Cooperative Marketing Program (SCMP). In October 1986, Cerner executed a Multiple National Distribution Agreement providing for distribution of DEC products in Canada in connection with PathNet.

GEOGRAPHIC MARKETS

- Approximately 99% of Cerner's sales in 1986 were derived from the U.S. and 1% from Canada. A two-year summary of geographic source of revenue follows (\$ thousands):

CERNER CORPORATION

FISCAL YEAR ITEM	1986		1985	
	Revenue	Percent of Total	Revenue	Percent of Total
U.S.	\$17,196	99%	\$ 9,990	97%
Canada	160	1	351	3
Total	\$17,356	100%	\$10,341	100%

COMPUTER HARDWARE

- Cerner has various DEC VAX and TI computers installed for research and development and customer support.

COMPANY PROFILE

CE SOFTWARE HOLDINGS, INC.

1801 Industrial Circle
West Des Moines, IA 50265
(515) 224-1995

Richard Skeie, President
Public Corporation, NASDAQ
Total Employees: 80
Total Revenue, Fiscal Year End
9/30/91: \$8,640,000

The Company

CE Software Holdings designs, develops, publishes, markets, and supports PC software to enhance the office communications, connectivity, and productivity of its business users.

- The company offers networking products, including its electronic mail program--QuickMail--and utility and application products such as QuicKeys, DiskTop, and CalendarMaker.
- While the bulk of its product development and sales have been for Macintosh applications, the company has in the last two years expanded its development to convert existing projects for IBM PCs and compatibles.
- CE Software's products are primarily marketed through independent distributors and dealers, and directly to large corporate accounts.

CE Software was formed in 1988 as Anubis Corp. and changed its name to CE Software Holdings after it acquired all the common stock of CE Software, Inc. in February 1990. Anubis had no operations prior to this acquisition.

In the five-year summary that follows, results prior to fiscal 1991 reflect the operations of CE Software, Inc.

**CE SOFTWARE HOLDINGS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$thousands, except per share data)**

ITEM	FISCAL YEAR				
	9/91	9/90	9/89	9/88	9/87
Revenue	\$8,640	\$6,355	\$2,893	\$2,174	\$402
· Percent increase from previous year	36%	129%	33%	441%	N/A
Income before taxes	\$2,160	\$2,143	\$181	\$85	\$19
· Percent increase from previous year	1%	*	113%	347%	N/A
Net income	\$1,437	\$1,389	\$123	\$64	\$17
· Percent increase from previous year	3%	*	92%	276%	N/A
Earnings per share	\$0.29	\$0.35	\$0.04	\$0.02	\$0.01
· Percent increase (decrease) from previous year	(17%)	*	100%	100%	N/A

* Percent change exceeds 1,000%.

CE Software has grown primarily due to increased sales of its two product groups, which have been continually upgraded and improved.

Research and development expenses were approximately \$1.4 million (16% of revenue) in fiscal 1991, \$693,000 (11% of revenue) in fiscal 1990, and \$434,000 (15% of revenue) in fiscal 1989.

As of September 1991, CE Software had 80 full-time employees, segmented as follows:

Marketing/sales	19
Development	24
Customer technical support	11
Customer service and production	13
General and administrative	<u>13</u>
	80

Competitors include Microsoft, Consumer Software, Inc., Lotus Development Corporation, Sitka Corporation (formerly TOPS, a division of Sun Microsystems), and WordPerfect Corporation.

Key Products and Services

One hundred percent of CE Software's revenue is derived from its software products.

- Networking products accounted for 56%, 57%, and 47% of total revenue for fiscal 1991, 1990, and 1989, respectively.
- Utility and applications products accounted for 44%, 43%, and 53% of total revenue for fiscal 1991, 1990, and 1989, respectively.

Networking Products:

QuickMail, introduced in 1988, is an electronic mail application for a computer network. It allows sending and receiving of messages, real-time conferencing, file sharing, message control, message filing, directory services, remote access, and connectivity through available bridges and gateways to various major electronic mail systems and users on networks.

- QuickMail is sold in packages for one, five, ten, fifty, or one hundred users. Suggested list price of a QuickMail 10 User Pak is \$599. The product is currently available in six languages.
- A QuickMail PC version, released in 1989, allows the addition of PCs using AppleTalk to a Macintosh QuickMail Network.
- In September 1991, CE Software released the QuickMail 2.5 version, which incorporates the Macintosh and IBM PC software in one package for use on QuickMail networks with Macintosh computers and IBM PCs using either AppleTalk or Novell networks.
- CE Software also separately sells certain proprietary bridges and gateways. QuickMail is also compatible with bridges and gateways from various third parties connecting with Macintosh, MS-DOS, and UNIX electronic mail systems.

In/Out, released in 1989, is a network application to assist in tracking people and availability of resources in an organization, in support of scheduling conferences and resources. The product is customizable for any AppleTalk network. A 10 User Pak has a suggested list price of \$299.95.

Utilities and Applications Software:

QuicKeys, introduced in 1987, is a macro program for the Macintosh. The current version, QuicKeys 2, was released in September 1990. The suggested list price is \$149.95.

DiskTop, released in 1987, is a system enhancing file management program for the Macintosh. The list price is \$99.95. A Windows version of DiskTop was released in early 1992.

CalendarMaker, introduced in 1986, is an application program for the Macintosh used to create and personalize presentation-quality calendars. The product lists for \$49.95. CE Software has also produced CalendarMaker PC to provide the same capabilities for IBM PCs and compatibles using Windows.

MockPackage Plus Utilities, released in 1984, is a desk accessory set--MockWrite, MockChart, MockPrinter, MockTerminal-- plus six utilities. The product lists for \$49.95.

Alarming Events, introduced in 1990, is a personal scheduling package in a desk accessory. It has a suggested list price of \$129.95.

Tiles, introduced in 1991, is a utility software product for the Macintosh that allows users to create miniature computing environments. Its list price is \$99.95.

Amazing Paint, introduced in 1990, is a black and white graphics program that lets users create or modify art. It lists at \$99.95.

Vaccine, introduced in 1988, warns users whenever certain significant resources are being modified.

Support:

Technical support services are available to customers free by electronic mail or telephone. These services include explaining how the customers' computer works and how their other software works.

Industry Markets

CE Software's products are targeted to business users.

Products are primarily marketed through three independent distributors in the U.S., through a number of independent dealers and distributors in other countries, and directly to large corporate accounts under site licensing agreements.

- A majority of CE Software's distribution is through three independent, nonexclusive distributors--Ingram Micro, Merisel, and Kenfil--which together accounted for approximately 64% of CE Software's total sales in fiscal 1991.
- Ingram Micro alone accounted for 32% of total sales in 1991.

- Generally, distributors purchase products at 50% discount from list prices, with additional discounts for prompt payment.
- Site licensing agreements from major corporate clients accounted for approximately 7% of revenue in fiscal 1991. CE Software provides direct marketing for corporate accounts and ongoing contacts with major distributors and dealers.

Geographic Markets

Approximately 83% of CE Software's fiscal 1991 revenue was derived from the U.S. and 17% from export sales. A three-year geographic source of revenue summary follows:

**CE SOFTWARE HOLDINGS, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR					
	9/91		9/90		9/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$7,155	83%	\$5,528	87%	\$2,529	88%
Exports						
- Europe	980	11%	521	8%	211	7%
- Australia	208	2%	182	3%	77	3%
- Canada	149	2%	124	2%	76	2%
- Japan	148	2%	--	--	--	--
TOTAL	\$8,640	100%	\$6,355	100%	\$2,893	100%

In addition to its headquarters in West Des Moines, the company has a sales and marketing office in San Mateo (CA).

CGI SYSTEMS, INC.

1180 W. Swedesford Road
Suite 350
Berwyn, PA 19312
Phone: (215) 993-8082
Fax: (215) 993-8125

President:	Joseph Ferrandino
Status:	Subsidiary
Parent:	CGI Informatique
Total Employees:	500
Total Revenue:	\$322,000,000
Fiscal Year End:	8/31/91

Key Points

- During 1992, four of CGI Informatique's (Paris, France) North American subsidiaries were consolidated as a single corporate entity, called CGI Systems, Inc. This reorganization will help CGI respond to the poor performance of the North American computer-aided software engineering (CASE) market by providing integrated services.
- CGI Systems is one of the four leading vendors of integrated CASE (I-CASE) tools.
- A 1991 review of CGI Systems' I-CASE software offering pointed out that the package had a steep learning curve, though it was highly rated for its ability to increase the speed of applications development.
- In 1991, CGI Systems moved into the UNIX market with PACLAN/X, a UNIX-based I-CASE system developed first for Hewlett-Packard's HP-UX implementation and now for Bull's DPX2 and IBM's RISC 6000.
- In 1992, CGI Systems is emphasizing its CASE solutions for heterogeneous networks, recognizing the need to produce applications within a client/server architecture.

Company Description

CGI Systems, Inc. is a new consolidation of four CGI Informatique subsidiaries. This reorganization unites the consulting services and software products of the CGI Group Worldwide. The newly reorganized company offers integrated CASE software and associated software maintenance, MRP software, professional consulting services, Yourdon Method training and consulting, and Novell LAN training and certification courses.

Company History

In 1992, CGI Systems, Inc. is used to describe a consolidation of four subsidiaries of CGI Informatique--CGI Consulting, Inc., CGI Systems Inc., Yourdon, Inc., and PRODSTAR.

- The corporation will be headquartered in Berwyn (PA) and will consist of six divisions: the CASE Products Division, Pearl River (NY); the Yourdon Method Division, Raleigh (NC); three Regional Consulting Divisions located in New York (NY), Wayne (PA), and Orlando (FL), and a LAN Education Division in Berwyn (PA).
- Originally, CGI Systems, Inc. referred to the CASE company that was a subsidiary of CGI Informatique, located in Pearl River (NY) originally incorporated in 1980.

Financials

In 1991, worldwide revenue for CGI Systems, Inc. (net of interest expenses) was approximately \$322 million.

Major Alliances

CGI Systems has product development and marketing arrangements with Hewlett-Packard, DEC, Oracle, and Bull HN.

Employees

As of March 1992, CGI Systems had approximately 500 employees, segmented as follows:

Marketing	10%
Customer support	5%
Research and development	5%
Computer operations	70%
General and administrative	<u>10%</u>
	100%

Competitors

CGI Systems' competitors fall into the following categories--companies offering CASE-related application software packages and services, companies offering systems integration consulting, and those offering methods training, LAN training and MRP software.

- CASE application software competitors include Texas Instruments, KnowledgeWare, Andersen Consulting, Intersolv, and Oracle.
- Professional services competitors include Booz Allen, Andersen Consulting, and other Big Six firms.

Key Products and Services

INPUT estimates that approximately 33% of CGI System's 1991 revenue was derived from sales of its I-CASE software, and the remaining 67% derived from associated software maintenance and professional services.

Professional Services:

CGI Consulting Divisions offer a value-added services approach to I-CASE. Consulting services are offered on:

- Management and methods
- Systems requirement analysis
- Project management

CGI Systems, Inc. I-CASE Software:

CGI Systems' products support a wide range of environments. These include both the platforms on which the repository operates as well as the target environments for which it can generate. A partial list includes:

Operates on:

- Mainframes:
 - IBM: MVS, VSE
 - Bull: GCOS8,7
 - Unisys: OS1100
 - ICL: VME
- LAN
 - UNIX
 - OS/2

Generates for:

- IBM: MVS, VSE, OS/400, System 38, System 36, OS/2
- Bull: GCOS8, 7, 6
- Unisys: OS1100, Series A
- ICL: VME
- Other: DEC, HP, Tandem UNIX, DOS
- Data bases: DB2, DL1, Oracle, IDMS, IDSII, RDMS, Teradata

PACBASE:

CGI Systems' PACBASE is an I-CASE tool designed to assist the systems analyst/designer in all phases of the design cycle from analysis through maintenance, based on a single, shared information platform, a repository. PACBASE consists of a combination of three products: PACDESIGN™, PACBENCH™, and PACREVERSE™.

- PACDESIGN provides facilities for the analysis and design of business applications. It implements several major design methodologies (Yourdon, SSADM, Merise). PACDESIGN provides logistical support for the functions of planning, analysis, and design in the system life cycle. It is based on a multi-user repository.
- PACBENCH provides facilities for the creation of complete documented applications, which can be targeted to over thirty environments.
- PACREVERSE standardizes existing applications and integrates them into the CGI repository. It allows for the use of the same environment for both application maintenance and development.

PACLAN and PACLAN/X:

PACLAN is a fully integrated CASE system supporting application development on local and distributed networks.

PACLAN/X supports application development on a network of MS/DOS and OS/2 workstations linked through a UNIX client/server architecture.

Customers

There are more than 30,000 users of CGI CASE tools at 800 sites worldwide, including GTE Data Services, the U.S. Air Force and Navy, Nordstrom, ITT Financial Services, and Dylex, Canada's largest clothing retailer.

Industry Markets

CGI Systems' products are marketed across industry segments; however, there has been a strong demand for CASE development tools in the banking/finance, insurance, and retail industries.

Geographic Markets

CGI Systems' revenue are primarily derived from North American markets as CGI Systems is the U.S. subsidiary of CGI Informatique. CGI has a separate Canadian division called SIRC, Inc.

COMPANY PROFILE

CGI SYSTEMS, INC.

One Blue Hill Plaza
P.O. Box 1645
Pearl River, NY 10965
(914) 735-5030

Richard Ramsdell, President
Subsidiary of CGI Informatique
Total Employees: 250*
Total Revenue, Fiscal Year End
8/31/89: \$25,000,000*

* INPUT estimate

The Company

CGI Systems, Inc., incorporated in 1980, is a wholly owned subsidiary of Paris-based CGI-Informatique. CGI Systems is devoted to the marketing and support of PACBASE™ in North America. PACBASE integrates Analysis, Design, and Implementation Workstations with an Active Enterprise Specifications Dictionary Generator to support the entire life cycle from design through maintenance.

- CGI-Informatique is a \$200 million, 2,500 employee multinational company that provides professional services and markets PACBASE worldwide.

Key Products and Services

CGI Systems derived approximately 85% of its fiscal 1989 revenue from sales of its integrated computer-aided software engineering (I-CASE) software, with the remaining 15% being derived from associated software maintenance and professional services.

CGI Systems markets PACBASE and the PACBASE Workstation Series.

PACBASE is an I-CASE tool designed to assist the system analyst/designer in all phases of the life cycle from analysis through maintenance.

The PACBASE PC Workstation Series™ consists of PACDESIGN™ and PACBENCH™. Both PACDESIGN and PACBENCH are integrated with PACBASE's mainframe dictionary, but offer the added advantage of using cheaper workstation processing time, displaying the system in a graphical format, and offering the user friendliness associated with microcomputers.

- PACDESIGN handles the functions of planning, analysis, and design in the system life cycle. PACDESIGN was developed independent of any design methodology, and as such can be

tailored to accommodate any methodology. The initial product comes with prepackaged versions supporting Yourdon and MERISE methodologies.

- PACBENCH handles the functions of programming, implementation, and maintenance in the system life cycle. PACBENCH performs its functions much in the same way that PACBASE does, but has the added user friendly features found on the microcomputer.

PACBASE assistance and features are documented for each of the four phases (functional analysis, system design, implementation, and maintenance) of a system life cycle as follows:

Functional Analysis

- During the analysis phase the system designer enters management rules and procedures, data elements and descriptions, screen layouts, and report layouts. The system designer uses PACDESIGN and PACBENCH or the PACBASE mainframe-based Application Development Workbench which provide integrated facilities for data modeling, data base descriptions, prototyping, program design, report composition, screen design, and documentation entry for both the analysis and design phase.
- The system elements are maintained in PACBASE's Specifications Dictionary, which will maintain all system description information throughout the system life.
- The Specifications Dictionary is accessed via the Specifications Dictionary Manager. The Specifications Dictionary Manager is a production-quality DBMS with the following unique features: journaling of dictionary entries; integrity controls that ensure data base consistency and recovery in the event of a system failure; multiuser access to concurrent use of specifications from higher libraries; library management to provide effective data organization; and versioning for formal control of application releases.
- During this phase the user may define screens and reports, or have PACBASE do it automatically. The user can then step through the system screens and reports as the finished system should look. During this initial phase the system analyst will be entering, mostly in narrative form, descriptions of major system functions, information flow, and process descriptions.
- At the conclusion of phase 1, the Specifications Dictionary

should have all the information necessary to produce a functional specifications document, which PACBASE will do automatically.

System Design

- During the system design phase the system designer will further refine and extend the information contained in the Specifications Dictionary. To create program structures, the developer organizes non-procedural specifications into logical groups. Then, using PACBASE's Program and Documentation Generator the designer can determine whether PACBASE will generate the code for the program or whether additional instructions are necessary.
- In case additional instructions are necessary, or if the designer wants to use some of his/her own algorithms, the designer can use the PACBASE Preview feature to specify where new instructions should be added. The new instructions are written in either PACBASE Structured Code or COBOL.
- The system design phase yields complete program specifications describing the operations of all programs, the layouts for all screens and reports, the data validation and updating rules, and the format and content of all data structures.

Implementation

- During implementation, the information in the Specifications Dictionary is converted by the PACBASE Program and Documentation Generator into a complete operational system consisting of programs, screen maps, data base descriptions, error messages, documentation and on-line help.

Maintenance

- Typically the greatest savings from using PACBASE are realized during the maintenance phase. By using a single integrated CASE tool through the entire life cycle of a system, the user benefits from consistency of documentation and systems structure, thus simplifying updates. Once a change or enhancement to a system is made, automated facilities allow the user to view repercussions on all elements of the system and across related systems, which can be seen instantly as all elements of the system are maintained in the Specifications Dictionary and cross-referenced. When the decision to go forward with a change or enhancement is made, PACBASE will perform all the related changes necessary for the system(s) to

remain consistent and regenerate the system(s).

- PACBASE also has a Table Manager for programs which need to make reference to an external table. The table management function allows any program generated by PACBASE to access tables for data validation, code translation, or other functions.
- PACQUERY is another microcomputer-based product that interacts with PACBASE's mainframe resident dictionary. PACQUERY is a query facility designed for the end user and MIS professionals.

PACBASE runs on Honeywell Bull, IBM, and Unisys mainframe processors. PACBASE licenses for between \$250,000 and \$350,000. Maintenance for the system is 15% of the purchase price per year. PACBASE was first installed in 1972 and currently has over 650 users in Europe and North America.

Industry Markets

PACBASE is marketed across industry segments; however, there has been strong demand for the product in the banking, insurance, and financial services industries.

Geographic Markets

PACBASE is marketed worldwide, but CGI Systems limits its marketing efforts to North America.

COMPANY HIGHLIGHT

**CHASE ECONOMETRICS/INTERACTIVE
DATA CORPORATION**
486 Totten Pond Road
Waltham, MA 02154
(617) 890-1234

Carl G. Wolf, Vice President, Chase
Manhattan Bank, N.A. and Chief
Operating Officer Chase Econometrics/
Interactive Data Corporation
Subsidiary Of The Chase
Manhattan Bank, N.A.
Total Revenues, FYE 12/31/80:
\$74 million*
Non-Captive Computer Services
Revenues: \$66 million*

THE COMPANY

- Chase Econometrics and Interactive Data Corporation were acquisitions made by Chase Manhattan N.A. in 1971 and 1974 respectively. In 1978, Chase organized the two groups into Chase Econometrics/Interactive Data Corporation to operate independently of its three other computer services firms, Computer Power, Chase TCMS and Managistics.
- Chase Econometrics/Interactive Data Corporation is a major supplier of financial and economic data bases, and forecasting, consulting and computer services.
- INPUT estimates its 1980 non-captive revenues at \$66 million, a 43% increase over 1979 revenues of \$46 million. 1981 non-captive revenues should exceed \$80 million.
- Chase Econometrics/Interactive Data has one subsidiary, Interactive Data Services, which supplies securities prices in machine-readable form to bank trust departments for portfolio management. A former subsidiary, Dynamic Associates, has been absorbed into the organization.
- The combined organization employs 1300 people:

- Marketing and sales	350
- (including customer support)	300
- Software development and data collection	150
- Computer operations	150
- General and administrative	350
- Other (economists and consultants)	
	<u>1,300</u>

*INPUT estimate

CHASE ECONOMETRICS/INTERACTIVE DATA CORPORATION

- The major competitor is Data Resources, Inc., which is analogous to the combination of Chase Econometrics and Interactive Data Corporation.
- The company considers its major strengths to be:
 - Extensive field sales and consulting services organizations of excellent quality distributed geographically throughout the U.S.
 - An extensive number of financial and economic data bases.
 - Analytical software, particularly XSIM.
 - Experienced economists.
 - Flexible and comprehensive cash management products and services.

KEY PRODUCTS AND SERVICES

- Most of Chase Econometrics/Interactive Data's computer services revenues are derived from processing services:

Processing services	70%
Software products	1
Professional services	5
Other (econometric consulting and subscription fees)	<u>24</u>
	100%

- Of the processing services, there is an equal amount of interactive and inquiry/response (45% each), with the remaining 10% attributable to remote batch services.
- All of the processing services are specialty services, which are the provision of financial and economic data bases and associated services.
- The company's services fall into five main categories:
 - Economic and Econometric Services provide economic monitoring and forecasting, economic consulting by senior economists, extensive economic data bases and econometric software for various analytical and forecasting applications.
 - Corporate Finance and Marketing Planning provides financial and statistical software, and financial and econometric data bases for various corporate activities including financial planning, market planning, and merger and acquisition analysis.
 - Cash Management provides data collection, regional balance reporting, depository transfer, cash forecasting, short-term investment management and other computer-based management services.

CHASE ECONOMETRICS/INTERACTIVE DATA CORPORATION

- Investment Research provides access to extensive corporate securities price information for technical and fundamental securities research.
- Portfolio Management provides portfolio accounting, performance measurement and modern portfolio theory services.
- Key software products available are:
 - XSIM, a conversational processing language for information management and analysis, is applicable to a wide range of financial and economic activities including financial analysis, economic modelling, corporate planning, budget and control systems, industry analysis, product line forecasting, MIS systems, inventory systems and statistical analysis. It also offers complete programming capability. This unique system integrates complete data analysis and data display capabilities with access to private or public data bases.
 - XPORT helps to manage, evaluate, and analyze portfolios. It gives quick access to a trust department's client's holding, helps to prove that the customer's policy has been complied with, generates a full range of reports to meet IRS and ERISA requirements, prices funds within half an hour of the market close, and reconstructs old securities positions.
 - XDMS, a conversational data management language.
 - SPSS, a widely used tabulation and multivariate statistical package.
- Data bases available include:
 - Economic.
 - Historical (e.g., wholesale price index).
 - Forecast (e.g., financial and inflation).
 - Forecasting models used by Chase Econometrics.
 - Textual commentaries on U.S. and Chase Econometrics' reports.
 - Europrospects.
 - The Conference Board (U.S. economic data base).
 - Industry Data.
 - National Association of Homebuilders.
 - Regional Data Associates.
 - Ward's AutoInfoBank.
 - Metals Week.
 - Financial Statement Data.
 - COMPUSTAT Data Bases.
 - Value Line Data Bases.
 - EXSTAT Data Base.

CHASE ECONOMETRICS/INTERACTIVE DATA CORPORATION

- FDIC Data Base.
- FSLIC Data Base.
- Security Prices.
 - Security Master Data Base.
 - PRICES Data Base.
 - Split & Dividend Data Base.
 - Monthly/Quarterly Data Base.
 - MASTERPRICE Data Base.
 - Municipal Bond Data Base.
 - I/B/E/S Summary Statistic Data Base.
 - Commodities Data Base.
 - Foreign Exchange Data Base.
 - International Securities Data Base.
 - International Bond Data Base.

INDUSTRY MARKETS

- Revenues are derived mainly from manufacturing and banking and finance sectors:

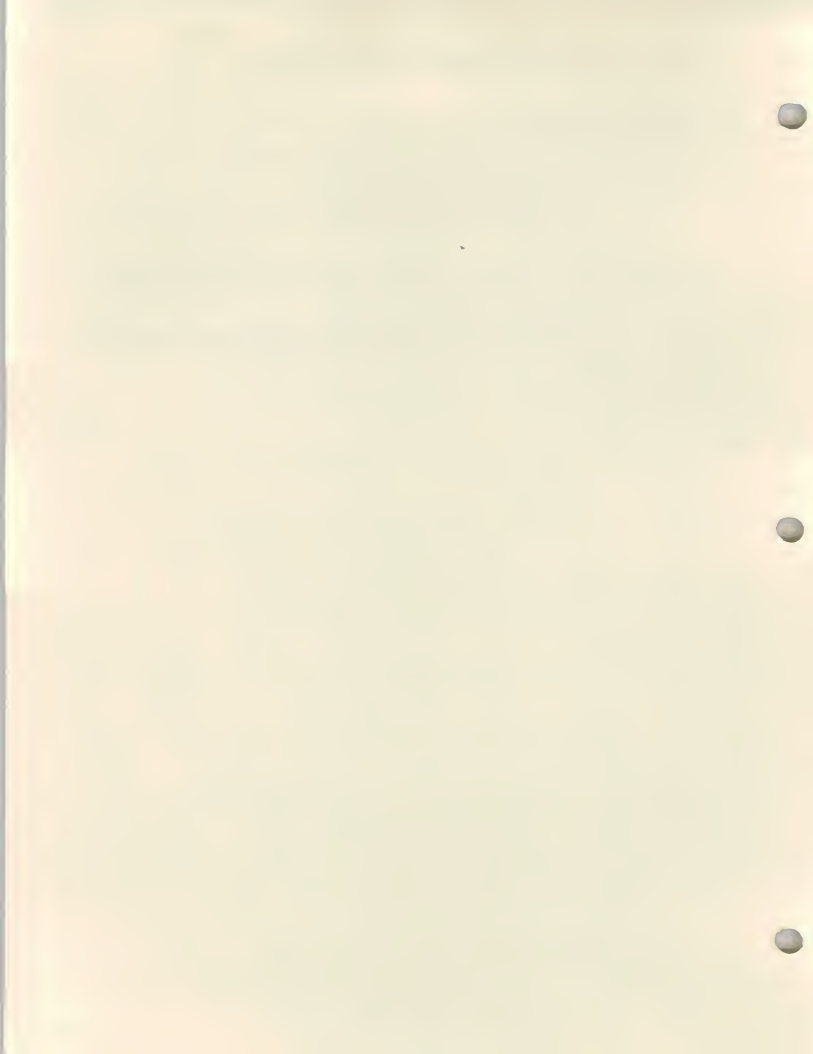
Manufacturing	40%
Banking and finance	40
Government	8
Transportation	5
Utilities	5
Distribution	<u>2</u>
	100%

GEOGRAPHIC MARKETS

- Ninety-five percent of revenues are generated in the U.S. The remaining 5% comes from offices in Brussels, Frankfurt, Milan, London, Toronto, and Japan.
- U.S. revenues come mainly from New York City and the Midwest, generating 35% and 25% respectively. The remainder is spread fairly uniformly throughout the country.
- The 22 U.S. branch offices for Chase Econometrics/Interactive Data are located in:
 - Atlanta
 - Boston
 - Chicago (2)
 - Cleveland
 - Detroit
 - Hartford
 - Houston
 - Los Angeles
 - Milwaukee
 - Minneapolis
 - New York City (3)
 - Philadelphia
 - Pittsburgh
 - San Francisco
 - Stamford (CT)
 - Washington, D.C. (2)
 - West Orange (NJ) (2)

COMPUTER HARDWARE

- There are two main processing centers, in Waltham (MA) and New York City.
 - Waltham has three Amdahl 470/V8s.
 - New York City has an IBM 370/135.
 - These systems run under a proprietary operating system, similar to IBM's VM.
- The company maintains numerous, varied minicomputers and COMTEN Communications processors around the country. There are Data 100 RJE terminals on-line from every office.
- Chase Econometrics/Interactive Data has its own domestic network, and a link to London and Frankfurt. They are also tied into Tymnet.



COMPANY HIGHLIGHT

CHASE ECONOMETRICS/INTERACTIVE
DATA CORPORATION
486 Totten Pond Road
Waltham, MA 02154
(617) 890-1234

1980 Revenues
66.7 non-captive
8 captive

74.7

John Zamzow, General Manager
and CEO, Chase Econometrics
Donald Hollis, General Manager
and CEO, IDC
Subsidiary Of The Chase
Manhattan Bank, N. A.
Total Revenues, FYE 12/31/79:
\$55 million*
Non-Captive Computer Services
Revenues: \$46 million*

THE COMPANY

- Chase Econometrics/Interactive Data Corporation is a major supplier of financial and economic data bases, forecasting, consulting and computer services.
- Interactive Data Corporation was formed in 1968 as a merger of the Interactive Data Services Division of White, Weld & Co., and the Computer Communications Center.
- In 1978, Chase organized Chase Econometrics and Interactive Data Corporation into Chase Econometrics/Interactive Data Corporation. Both organizations previously operated as organizational units of Chase's Information Services Department.
- Combined revenues are estimated to have grown from \$35 million in 1978, to \$55 million in 1979. 1980 revenues are expected to reach \$80 million. Chase does not report the actual revenues of these organizational units.
- Other operating units of Chase Econometrics/Interactive Data are:
 - Interactive Data Services, a subsidiary, which supplies securities prices in machine-readable form to bank trust departments for portfolio management.
 - Dynamics Associates in Cambridge (MA), acquired in 1977, which developed XSIM and other related applications for financial modeling, forecasting and planning.
- The combined organization employs 900 people:

COMPANY HIGHLIGHT/CHASE ECONOMETRICS/INTERACTIVE DATA CORPORATION

- Marketing and sales	260	(includes prime customer support)
- Software development	200	
- Computer operations	100	
- General and administrative	100	
- Other	240	(economists, consultants)
	<hr/> 900	

- The major competitor to both organizations is Data Resources, Inc., which is an excellent analogy to the combination of Chase Econometrics and Interactive Data Corporation.
- The company considers its major strengths to be:
 - Extensive field sales and consulting services organizations of excellent quality distributed geographically throughout the U.S.
 - An extensive number of financial and economic data bases.
 - Analytical software, particularly XSIM.
 - Experienced economists.
 - Flexible and comprehensive cash management products and services.

KEY PRODUCTS AND SERVICES

- Most of Chase Econometrics/Interactive Data's computer services revenues are derived from processing services:

Processing services	80%
Software products	1
Professional services	5
Other	14
	<hr/> 100%

- Of the processing services, there is an equal amount of interactive and inquiry/response (45% each), with the remaining 10% attributable to remote batch services.
- All of the processing services are specialty services, being the provision of financial and economic data bases and associated services.
- Chase Econometrics/Interactive Data prefers to identify services which it offers, rather than specific products, because the products are component parts of the services.

COMPANY HIGHLIGHT/CHASE ECONOMETRICS/INTERACTIVE
DATA CORPORATION

- The company's services fall into five main categories:
 - Economic and Econometric Services provide economic monitoring and forecasting, economic consulting by senior economists, extensive economic data bases and econometric software for various analytical and forecasting applications.
 - Corporate Finance and Marketing Planning provides financial and statistical software, and financial and econometric data bases for various corporate activities including corporate financial planning, marketing planning, merger and acquisition analysis.
 - Cash Management provides data collection, regional balance reporting, depository transfer, cash forecasting, short-term investment management and other computer-based management services.
 - Investment Research provides access to extensive corporate securities price information for technical and fundamental securities research.
 - Portfolio Management provides portfolio accounting, performance measurement and modern portfolio theory services.
- Key products available are:
 - XSIM, a conversational processing language for information management and analysis, applicable to a wide range of financial and economic activities, including financial analysis, economic modelling, corporate planning, budget and control systems, industry analysis, product line forecasting, MIS systems, inventory systems and statistical analysis. It also offers complete programming capability. This unique system integrates complete data analysis and data display capabilities with access to private or public data bases.
 - XPORT, which helps to manage, evaluate and analyze portfolios. It gives quick access to a trust department's client's holdings, helps to prove that the customer's policy has been complied with, generates a full range of reports to meet IRS and ERISA requirements, prices funds within half an hour of the market close and reconstructs old securities positions.
 - ANALYSTICS, one of the largest financial data bases available.
 - XDMS, a conversational data management language.
 - SPSS, a widely used tabulation and multivariate statistical package.
- Data Bases which are available include:
 - ECONOMIC.

COMPANY HIGHLIGHT/CHASE ECONOMETRICS/INTERACTIVE DATA CORPORATION

- . Historical (e.g., wholesale price index).
- . Forecast (e.g., financial and inflation).
- . Forecasting models used by Chase Econometrics.
- . Textual commentaries on U.S. and Chase Econometrics' reports.
- . Ohio Economic Data Base.
- . Europrospects.
- . The Conference Board (U.S. economic data base).
- Industry Data.
 - . National Association of Homebuilders.
 - . Regional Data Associates.
 - . Ward's AutoInfoBank.
- Financial Statement Data.
 - . COMPUSTAT data bases.
 - . Value Line Data Bases.
 - . EXSTAT Data Base.
 - . FDIC Data Base.

INDUSTRY MARKETS

- Revenues are derived mainly from manufacturing and banking and finance sectors:

Manufacturing	40%
Banking and finance	40
Government	8
Transportation	5
Utilities	5
Distribution	2
	<hr/>
	100%

COMPANY HIGHLIGHT/CHASE ECONOMETRICS/INTERACTIVE
DATA CORPORATION

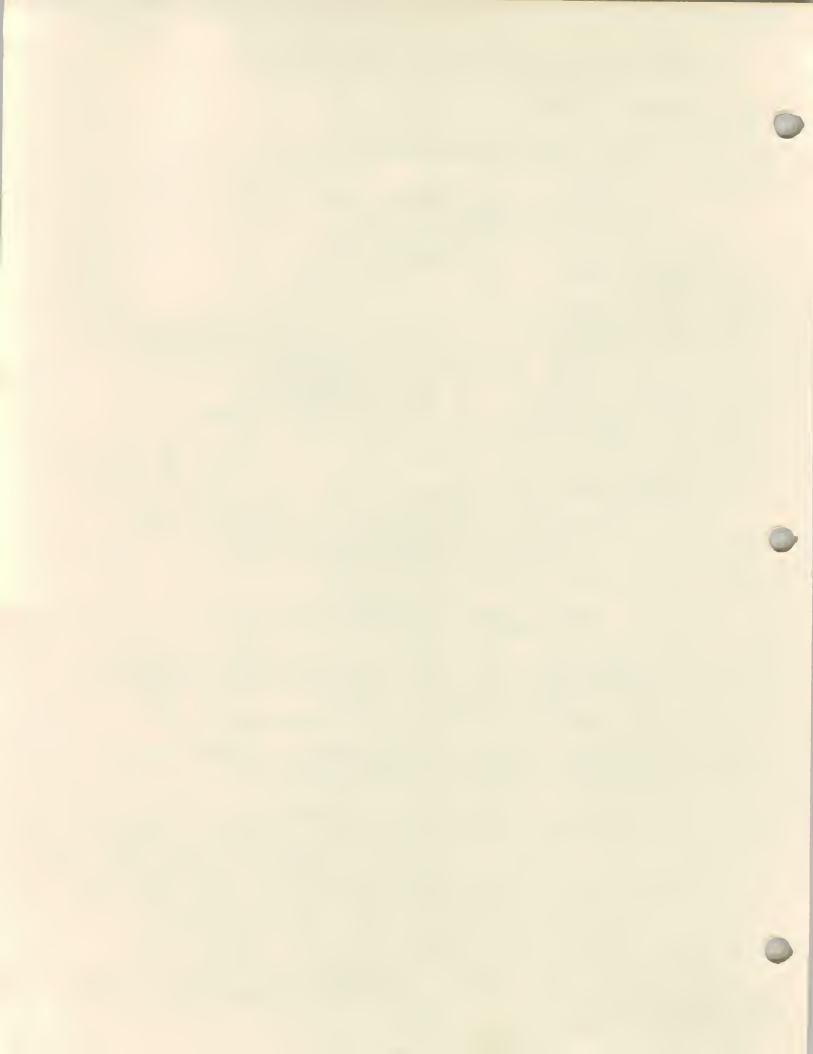
GEOGRAPHIC MARKETS

- Ninety-five percent of revenues are generated in the U.S. The remaining 5% comes from offices in Brussels, Frankfurt, Milan, London and Toronto.
- U.S. revenues come mainly from New York City and the Midwest, generating 35% and 25% respectively. The remainder is spread fairly uniformly throughout the country.
- The twenty U.S. branch offices for Chase Econometrics/Interactive Data are located in:

- Atlanta	- Minneapolis
- Boston	- New York City (3)
- Chicago	- Philadelphia
- Cleveland	- Pittsburgh
- Detroit	- San Francisco
- Hartford	- Stamford (CT)
- Houston	- Washington, D.C.
- Los Angeles	- West Orange (NJ) (2)
- Milwaukee	

COMPUTER HARDWARE

- There are two main processing centers, in Waltham (MA) and New York City.
 - Waltham has an IBM 370/168 and an Amdahl 470/V8.
 - New York City has an IBM 370/135.
 - These systems run under a proprietary operating system, similar to IBM's VM.
- The company maintains numerous, varied minicomputers and COMTEN Communications processors around the country. There are Data 100 RJE terminals on-line from every office.
- The computer system and network is available 24 hours a day.
- Chase Econometrics/Interactive Data has its own domestic network, and a link to London and Frankfurt. They are also tied into TYMNET.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program

August 1997

Check Point Software Technologies Ltd.

CHECK POINT[™]
Software Technologies Ltd.



3A Jabotinsky St. 24th Floor
Ramat Gan, 52520
Israel

Phone: +972-3-613-1833

Fax: +972-3-575-9256

Internet: <http://www.checkpoint.com>

400 Seaport Court
Suite 105
Redwood City, CA 94063
U.S.

Phone: (650) 562-0400

Fax: (650) 562-0410

Chairman:	Nir Barkat
President & CEO:	Gil Shwed
Status:	Public
Employees:	170+ (12/97)
Revenue:	\$31,869,000
Fiscal Year End:	12/31/96

Key Points

- Check Point Software Technologies Ltd. develops, markets, and supports network security software products that enable connectivity with security and manageability systems.

- In July 1997, Check Point announced the Check Point Partner Alliance Program for Check Point resellers, VARs, distributors, and Authorized Training Centers.
- In May 1997, Check Point and OLSY, a member of the Olivetti Group, announced an international agreement establishing the OLSY subsidiaries as resellers of the Check Point[™] FireWall-1[™] enterprise security solution.
- In April 1997, Check Point launched its OPSEC (Open Platform for Secure

Enterprise Connectivity) Alliance, an open, industry-wide initiative dedicated to providing enterprise-wide security solutions.

- In March 1997, Check Point began shipping Fire Wall-1 version 3.0, the newest version of the company's flagship network security software.
- In September 1996, Check Point announced its expansion into the Mexican market through the appointment of two key partners in Mexico: Intersys, a local provider of enterprise-wide value-added networking services, and global Enterprise Services, Inc., a provider of international Internet and networking services.
- In July 1996, Check Point opened its subsidiary in Cambridge (U.K.)

Company Description

Founded in 1993 in Israel, Check Point Software Technologies Ltd. is a leading vendor of Internet security software.

Check Point's FireWall-1 technology provides software that enables systems administrators to create and enforce an enterprise-wide network security policy. In 1996, the company held an estimated 44% of the worldwide firewall market.

In June 1996, Check Point completed its initial public offering of three million shares, generating approximately \$42 million for the company.

Operations and Structure

Check Point's international headquarters and research and development facilities are located in Ramat-Gan (Israel), a suburb of Tel-Aviv.

The company also operates a wholly owned subsidiary, Check Point Software

Technologies, Inc., located in Redwood City (CA), and maintains U.S. offices in Alexandria (VA), Atlanta (GA), Chicago (IL), Denver (CO), El Segundo (CA), Houston (TX), Lexington (MA), and New York (NY).

Other international offices are located in Cambridge (U.K.), Paris (France), Munchen-Unterföhring (Germany), Singapore, and Tokyo (Japan).

Key executives are listed in Exhibit 1.

Exhibit 1

Check Point Software Technologies Ltd. Key Executives

Name	Title
Gil Shwed	CEO, President, and co-founder
Shlomo Kramer	Executive Vice President, co-founder
Hagi Schwartz	Chief Financial Officer
Deborah D. Triant	CEO and President, U.S. subsidiary
Marius Nacht	Vice President, International Operations and co-founder
Jacqueline Ross	Vice President, Marketing
Asheem Chandra	Vice President, Business Development
John Cunningham	Vice President, Sales and Field Operations

Company Strategy

Check Point's objective is to maintain and enhance its position as the network security market and technology leader by offering a broad line of products.

Key elements of the company's strategy are to:

- Offer a broad range of integrated network security solutions
- Employ a leveraged, global sales and distribution model

- Partner with key industry participants
- Promote brand awareness
- Maintain and enhance technological leadership

Market Strategy

The company's marketing efforts are focused on promoting Check Point FireWall-1 as the leading product for network security.

Sales efforts focus on expanding the installed base and increasing the penetration level of end-user customers worldwide by leveraging two channels of distribution: OEMs and a multilevel reseller channel.

Product Strategy

Check Point's new product development efforts are focused on enhancements of its current family of products and new network security products, including products that support additional platforms.

Future development efforts are expected to focus on the addition of new network administration features, extended support for applications, support for additional encryption and authentication standards, and a further enhanced graphical user interface.

Although the company expects to develop its new products internally, it may acquire or license certain technologies or products from third parties in the future.

Financials

Revenue for 1996 was nearly \$31.9 million, an increase of 234% over revenue of \$9.5 million in 1995. The company expects revenue for 1997 to reach \$47.5 million. Net income rose to \$15.2 million during 1996.

A three-year financial summary is shown in Exhibit 2.

Exhibit 2

Check Point Software Technologies Ltd. Three-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year		
	1996	1995	1994
Revenue	\$31.9	\$9.5	\$0.79
• Percent change from previous year	234%	N/A	N/A
Income before taxes	\$15.6	\$4.8	\$0.02
• Percent change from previous year	225%	N/A	120%
Net income	\$15.2	\$4.8	\$0.02
• Percent change from previous year	214%	N/A	120%
Earnings per share	\$0.43	\$0.14	--
• Percent change from previous year	207%	N/A	N/A

Source: Check Point Software Technologies Ltd.

- Management attributes increases in 1996 revenue primarily to the growth in the market for network security products, expanded awareness of the company's products, and increased sales through SunSoft, Check Point's largest reseller, and other resellers.
- Revenue from sales to SunSoft, represented 42% of overall revenue during 1996, compared to 64% and 54% of the company's revenue for 1995 and 1994, respectively.

Research and development expenditures for 1996 were \$3.3 million, up 200% from the \$1.1 million spent during the same period in 1995.

Interim Results

Revenue for the six-month period ending June 30, 1997 was \$30.9 million, compared to \$12.2 million during the same period in 1996. Net income for the period was approximately \$14.2 million, an increase of 137% from the nearly \$6.0 million during the same period the previous year.

Research and development expenditures for the period were \$2.3 million, up from \$1.2 million during the same period in 1996.

Revenue Analysis by Product/Service

Check Point's revenue is derived from the sale of software products and related maintenance contracts.

Units shipped in 1996 grew 200% over the previous year. The Windows NT product shipments accounted for an estimated 49% of channel bookings in the first quarter of 1997.

Geographic Markets

INPUT estimates that approximately 75% of Check Point's 1996 revenue was derived from the U.S., and the remaining 25% from international sources.

Despite this high percentage, the company believes that because it sells its products to resellers and OEMs in the U.S. that have international customer bases, a significant portion of its products are resold outside the U.S.

Exhibit 3 shows a three-year summary of revenue classified by geographic destinations.

Exhibit 3

Check Point Software Technologies Ltd. Three-Year Geographic Source of Revenue Summary

Geographic Market	Fiscal Year		
	1996(a)	1995	1994
	Percent of Total	Percent of Total	Percent of Total
Israel	2%	2%	4%
U.S.	75%	83%	90%
Europe	13%	8%	1%
Far East	8%	6%	5%
Other	2%	1%	---
Total	100%	100%	100%

(a) INPUT estimates.

Employees

As of March 31, 1997, Check Point had more than 140 employees worldwide, compared to 51 employees as of March 31, 1996.

The company currently has an estimated 240 employees—approximately 90 in the U.S. and 150 in Israel.

Key Products and Services

Check Point's Open Platform for Secure Enterprise Connectivity(OPSEC) is a single platform that integrates and manages all aspects of network security through an open, extensible management framework. It uses a combination of published application programming interfaces (APIs), support for industry-standard protocols, and a high-level scripting language.

FireWall-1

Check Point's FireWall-1 family of products includes the FireWall-1 Enterprise products, the FireWall-1 Gateway products, and the recently introduced FireWall-First! product, each of which is based upon the company's Stateful Inspection Architecture.

Check Point FireWall-1 Version 3.0 introduces the first shrink-wrapped firewall package, and the first to employ an easy-to-use graphical interface.

- Fire Wall-1 3.0 features content security, connection control, enhanced encryption and authentication, active network management, across-the-board client server architecture, and support for new services.
- The active network management is completely integrated with network security and provides complete real-time control of the network configuration, including data for accounting, and bill-back purposes, and live connections monitoring.
- Additions of X/Motif Client GUI extends client/server architecture to all supported UNIX platforms. Network address translation (NAT) GUI has been added for client/sever models.
- Support for rule-based time restrictions has been added to Fire Wall-1 version 3.0. New access levels for the management tools are supported for Windows 95/NT and Motif interfaces.

Check Point FireWall-1 Version 2.1 provides enterprise, Internet, and intranet gateway(s) with distributed management capabilities.

- FireWall-1 Version 2.1 supports UNIX platforms running SunOS, Solaris, or HP/UX, and includes Internet and intranet gateway support for Microsoft Windows NT, and management console support for Windows NT and Windows 95.
- It includes integrated support for FireWall-1 SecuRemote™ client encryption software that is designed to enable secure, private communications by mobile and remote users.

FireWall-1 Inspection Module™—Used with a Fire Wall-1 Enterprise product, the Inspection Module provides additional inspection modules for multiple gateway implementation.

FireWall-First!™—An entry-level firewall that provides basic Internet and intranet access control while maintaining network security.

- FireWall-First! is designed to be used as a company's first Internet access control option.
- FireWall-First! uses an HTML-based graphical user interface (GUI) that can be accessed on-line by a system administrator using a Web browser.

Marketing and Sales

Check Point's products are sold worldwide primarily through intermediate distribution channels, including OEM partners, distributors, VARs, systems and network integrators, and Internet Service Providers, all of which are supported by the company's direct field organization.

The company's three largest resellers, SunSoft, Inc., Forval Creative, Inc., and Internet Security Corporation, represent the majority of Check Point's revenue.

- Approximately 82% and 80% of total revenue was derived from these three resellers in 1995 and 1994, respectively.
- In 1996, SunSoft the company's largest reseller, represented 42% of overall revenue, compared to 58% and 54% for 1995 and 1994, respectively.

During the fourth quarter of 1996, Check Point established a national two-tiered distribution through new partnerships with Westcon and Ingram Micro.

The number of units shipped in 1996 grew 200% over the previous year due to the significant increase in resellers, distributors, and systems integrators carrying the Check Point products.

Clients

As of March 1997, Check Point had more than 20,000 installations in small to Fortune 100 companies and government agencies worldwide. As of March 1996, the company had approximately 6,000 installations.

A sampling of clients includes Boston Edison, British Columbia Telephone, Royal Caribbean Cruise Lines, San Diego State University, Times Mirror, Time Warner, U.S.A.A, VLSI and Westinghouse.

MCI Communications and US West have recently announced managed Internet/intranet services for their corporate customers incorporating Check Point products.

Alliances

In July 1997, Check Point announced the Check Point Partner Alliance Program to provide value-added services and incentives for Check Point resellers, VARs, distributors, and Authorized Training Centers.

- The program provides VARs and resellers with access to sales, marketing, and support resources.
- Partner Alliance members are divided into the following categories:
 - Premier Partner—Direct resellers carrying the Check Point product line
 - Authorized Partner—Indirect resellers carrying the Check Point product line
 - Distribution Partners—Those that sell the Check Point product line to the indirect reseller channel
 - Training Partners—These partners operate Check Point Authorized Training Centers, deliver technical training regarding general Internet and intranet security issues and the Check Point product line.
- Check Point relationships with resellers worldwide include Bristol, Comtech, Cybertek Holdings, E&M Computing, Forval Creative, GCS, Integralis, Internet Security Corporation, LAN Control, OLSY, PacBell Network Integration, The Qualix Group, TT-Pro, UB Networks, and Vanstar.

Check Point has strategic alliances and partnerships with over 80 industry-leading companies through the OPSEC (Open Platform for Secure Enterprise Connectivity) Alliance.

- OPSEC Alliance partners receive the OPSEC Alliance logo, indicating that their products can plug into Check Point's FireWall-1 enterprise security solution through the OPSEC framework.
- More than 75 network security, internetworking platform, and Internet/intranet applications vendors have joined the OPSEC Alliance.

- The alliance partners are divided into three categories, and include the following partners:

- Infrastructure Partners embed or bundle Check Point FireWall-1 with their own products. Partners include: 3Com, Bay Networks, FTP Software, Inc., Hewlett-Packard, Ipsilon Networks, Inc., NCR, TimeStep, U.S. Robotics, Sun Microsystems, Inc. Xylan Corporation
- Framework Partners are developing or have developed complementary value-added products that can be certified as compatible with Check Point's OPSEC protocols and APIs. Partners include: *Content Security*—ASAP Ltd, Computer Associates/Cheyenne Software, Command Software Systems, Inc., DataFellows, Digitivity, Inc., Dr. Solomon's Software, EliaShim, Inc., Finjan Software, Integralis, Inc., McAfee Associates, NetPartners Internet Solutions, Inc., Security-7 Ltd., and Symantec Corporation *Authentication and Authorization*—Axent Technologies, Inc., ActivCard, Inc., Blockade Systems Corp., CryptoCard, Funk Software, MEMCO

Software, NeTegrity, Inc., Secure Computing Corp., SecuriTy Dynamics, and Vasco Data Security, Inc.

Encryption—RSA Data Security *Router Security Management*—3Com Corporation and Bay Networks, Inc. *Intrusion Detection*—AbirNet, Haystack Labs, Inc., Internet Security Systems, and Netect

Event Analysis & Reporting—Accrue Software Inc., Bellcore, BGS Systems, Inc., Kaspia Systems, SecureIT, Inc., Sequel Technology Corporation, and TELEMATE Software, Inc.

Event Integration—Hewlett-Packard, Stonesoft, and The Qualix Group, Inc.

- Passport Partners are application development vendors that ensure secure computing over the Internet via application compatibility with the OPSEC platform. Partners include: BackWeb Technologies, BMC Software Inc., Campbell Services, Inc., Citrix, Connected Corporation, e-motion Inc., FreeTel Communications, Gradient, Informix Software, InfoData Systems, Inc., Intel Corporation, Liquid Audio, Inc., Microsoft, Netscape Communications Corp., OnLive! Technologies, Oracle Corporation, OutReach Technologies, Inc., PointCast Inc., PictureTel Corporation, Progressive Networks, Inc., Starlight Networks, Sybase, Inc., VDOnet Corporation, VocalTec, Vosaic, Voxware, Inc., Vxtreme, Inc., White Pine Software, Inc., and Xing Technology Corp.

A sampling of Check Points' recent strategic alliances include the following:

- In July 1997, Check Point and ACI (Anixter Communication and Integration) established a partnership throughout

Europe whereby ACI will incorporate the Check Point FireWall-1 security solution.

- In July 1997, Alcatel and Check Point announced a partnership whereby Alcatel will integrate Check Point's FireWall-1 in its product portfolio as well as provide security services such as audit, consultancy, training support, and maintenance.
- In June 1997, UUNET Technologies, Inc., one of the world's largest Internet service providers, is integrating the Check Point FireWall-1 solution into ExtraLink Remote, its extranet offering, as well as customer enterprise sites.
- In May 1997, Check Point and OLSY, a leading provider of IT solutions and services and a member of the Olivetti Group, entered into an international agreement whereby the OLSY subsidiaries worldwide will resell the Check Point FireWall-1 enterprise security solution. OLSY will also offer FireWall-1 as part of its managed enterprise security solutions within the OliWeb Internet/intranet service offering.
- In early 1997, Check Point entered into a relationship with 3Com Corporation to manage the 3Com NETBuilder firewall from the Fire Wall-1 management console.
- Check Point recently entered a relationship with Ipsilon Networks to embed and deliver Fire Wall-1 on their IP Switch Processor.

- IBM Corporation announced that it will OEM and resell Fire Wall-1 for the RS/6000 family of servers through their own distribution channel.

- SunSoft, Inc., a subsidiary of Sun Microsystems, offers FireWall-1 as Solstice FireWall-1, a member of its Solstice family of enterprise management products.

- Xylan Corporation and Check Point have entered into a partnership to create the first firewall security LAN switch, and are working together to provide the first user-based secure virtual LANs.

Competition

Check Point's major competition comes from other network security providers, including Advanced Network and Service (a subsidiary of America Online), Border Technologies, Harris Corporation, Raptor Systems, Secure Computing, Sun Microsystems, and Trusted Information Systems, Inc.

Check Point also competes with companies focused on providing hardware and software to the enterprise network market, including Cisco Systems, Digital Equipment Corp., IBM, and Microsoft.

Check Point anticipates additional competition from other emerging and established companies such as AT&T, which has announced its intent to enter the network security market.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1996

CheckPoint Software Technologies, Ltd.

Chairman: Nir Barkat
President & CEO: Gil Shwed
35 Jabotinsky Street
Ramat-Gan 52511, Israel
Phone (CA subsidiary): (415) 562-0400
Fax (CA subsidiary): (415) 562-0410
Internet: <http://www.checkpoint.com>

CHECK POINT
Software Technologies Ltd.



Status:	Public
Employees:	70 (7/96)
Revenue (FYE 12/31/95):	\$9,545,818
Revenue: 3 Months ended 3/31/96:	\$4,838,906

Key Points

- CheckPoint Software Technologies, Ltd. develops, markets, and supports network security software products that enable connectivity with security and manageability systems.
- In March 1996, CheckPoint announced FireWall-1 for Windows NT, and began shipping the product in July.
- In 1996, CheckPoint introduced FireWall-First!, a basic Internet and intranet security solution.
- In March 1996, the company announced CheckPoint FireWall 1-SecuRemote client encryption software.
- In July 1995, Dr. Deborah Triant was named President & CEO of CheckPoint Software Technologies, Inc., the company's U.S.-based subsidiary.

Company Description

Founded in 1993, CheckPoint Software Technologies, Ltd. is the leading vendor of Internet security software.

CheckPoint's FireWall-1 technology provides software that enables systems administrators to create and enforce an enterprise-wide network security policy.

The company's products address the increasing demand for enterprise-wide network security solutions.

Operations and Structure

CheckPoint's headquarters and research and development facilities are located in Ramat-Gan, Israel, a suburb of Tel-Aviv.

The company also operates a wholly owned subsidiary, CheckPoint Software Technologies, Inc., located in Redwood City (CA), and maintains offices in Houston (TX), Lexington (MA), Alexandria (VA), El Segundo (CA), Denver (CO), New York (NY), Atlanta (GA), and Chicago (IL).

Key executives are listed below:

CheckPoint Software Technologies, Ltd. Key Executives

Name	Title
Gil Shwed	President & CEO
Shlomo Kramer	VP Product & Business Development
Marius Nacht	VP International Operations
Deborah D. Triant	President & CEO CheckPoint Software Technologies, Inc.
John Cunningham	VP Worldwide Sales & Field Operations CheckPoint Software Technologies, Inc.
Hagi Schwartz	VP Finance & CFO

Company Strategy

CheckPoint's objective is to maintain and enhance its position as the network security market and technology leader by offering a broad line of products.

Key elements of the company's strategy are:

- Offer a broad range of integrated network security solutions
- Employ a leveraged, global sales and distribution model
- Partner with key industry participants
- Promote brand awareness
- Maintain and enhance technological leadership

Market Strategy

According to International Data Corporation, CheckPoint was the leader in the worldwide market for firewall products in 1995, with a 40% share of units shipped.

The company's marketing efforts are focused on promoting CheckPoint FireWall-1 as the leading product for network security.

Sales efforts focus on expanding the installed base and increasing the penetration level of end-user customers worldwide by leveraging two channels of distribution: OEMs and a multilevel reseller channel.

Product Strategy

CheckPoint's new product development efforts are focused on enhancements of its current family of products and new network security products, including products that support additional platforms.

Future development efforts are expected to focus on the addition of new network

administration features, extended support for applications, support for additional encryption and authentication standards, and a further enhanced graphical user interface.

Although the company expects to develop its new products internally, it may acquire or license certain technologies or products from third parties in the future.

In June 1996, CheckPoint made an initial public offering of three million shares, which generated approximately \$42 million for the company.

Financials

Revenue for 1995 was \$9.5 million, up significantly over revenue of \$794,000 in 1994. A two-year financial summary is shown below.

Management attributes increased revenue primarily to the growth in the market for network security products, expanded awareness of the company's products, and increased sales through SunSoft and other resellers.

- CheckPoint's revenues are derived from the sale of software products and related maintenance contracts.
- Of these revenues, 80% were from the company's three largest resellers in 1995, and 82% of revenue came from the same three in 1994.
- Revenues from sales to CheckPoint's largest reseller, SunSoft, represented 64% and 54% of the company's revenues for 1995 and 1994, respectively.

CheckPoint Software Technologies, Ltd. Two-Year Financial Summary (\$ Thousands, except per-share data)

Item	Fiscal Year	
	1995	1994
Revenue	\$9,546	\$794
• Percent change from previous year	**	N/A
Income before taxes	\$4,837	\$24
• Percent change from previous year	*	120%
Net income	\$4,847	\$24
• Percent change from previous year	*	120%
Earnings per share	\$0.14	--
• Percent change from previous year	140%	N/A

* Percent change is greater than 1,000%.

Research and development expenditures for 1995 were \$1.1 million, up 746% from the \$130,000 spent during the same period in 1994.

Sales and marketing expenses were \$1.7 million in 1995, compared to \$303,000 in 1994, a 461% increase. Management attributes this increase to an overall increase in the company's sales and marketing efforts and the opening of CheckPoint's U.S. subsidiary.

Interim Results

Revenues for the three months ending March 31, 1996 were approximately \$4.8 million, compared to \$1.6 million for the same period in 1994, a 200% increase. Approximately 58% of revenue for the three months ending March 31, 1996 came from sales to SunSoft.

Net income for the first three months of 1996 was approximately \$2.8 million, a 233% increase from the approximately \$841,000 generated during the same period in 1995.

Geographic Markets

Approximately 83% of CheckPoint's revenues in 1995 came from sales to U.S. customers, a decrease from the 90% of revenues generated by sales to U.S. customers in 1994.

Despite these high percentages, the company believes that because it sells its products to resellers and OEMs in the U.S. that have international customer bases, a significant portion of its products are resold outside the U.S.

Employees

As of March 31, 1996, CheckPoint had 51 employees, segmented as follows:

Marketing and sales.....	19
Customer support.....	6

Research and development.....	18
Administration and finance.....	8
	51

The company currently has more than 70 employees worldwide.

Key Products and Services

CheckPoint's FireWall-1 family of products includes the FireWall-1 Enterprise products, the FireWall-1 Gateway products, and the recently introduced FireWall-First! product, each of which is based upon the company's Stateful Inspection Architecture.

CheckPoint FireWall-1 Version 2.1:

- Provides enterprise, Internet and intranet gateway(s) with distributed management capabilities
- Supports UNIX platforms running SunOS, Solaris, or HP/UX
- Also includes Internet and intranet gateway support for Microsoft Windows NT, and management console support for Windows NT and Windows 95
- Includes integrated support for FireWall-1 SecuRemote™, client encryption software that is designed to enable secure, private communications by mobile and remote users via dial-up connections through the user's Internet service provider
- CheckPoint FireWall-1 includes support for visual private networking (VPN), user authentication and client authentication.
- Version 2.1 also includes includes integrated support for RealAudio™, VDOLive™, Internet Phone™, and Oracle SQL*Net.

- The list price ranges from \$4,990 for a 50-node LAN (\$9,990 for 50 to 250 nodes) to \$39,990 for unlimited nodes.

FireWall-1 Inspection Module™:

- Is used with a Fire-Wall1 Enterprise product, the Inspection Module provides additional inspection modules for multiple gateway implementation.
- The list price for a single gateway with unlimited nodes ranges from \$2,790 to \$7,990.

FireWall-First™:

- Is an entry-level firewall that provides basic Internet and intranet access control while maintaining network security.
- Is designed to be used as a company's first Internet access control option.
- Uses an HTML-based graphical user interface (GUI) that the system administrator can access on-line using a Web browser.
- Currently, the product is only available through a bundling arrangement under which the product is included in every computer in Sun Microsystems' Netra series of Internet servers.

Clients

As of March 31, 1996, CheckPoint Software had more than 6,000 installations in small to Fortune 100 companies and government agencies worldwide.

Clients include: Boston Edison, British Columbia Telephone, Royal Caribbean Cruise Lines, San Diego State University, Times Mirror, Time Warner, U.S.A.A, VLSI and Westinghouse.

Alliances

CheckPoint has strategic alliances or partnerships with the following companies:

- SunSoft, Inc., a subsidiary of Sun Microsystems, offers FireWall-1 as Solstice FireWall-1, a member of its Solstice family of enterprise management products.
- Hewlett-Packard Company offers CheckPoint FireWall-1 through its worldwide network of distributors and resellers.
- UB networks, supplier of network hardware and software products and a subsidiary of Tandem Computers, sells and supports FireWall-1.
- Oracle Corporation and CheckPoint Software are working together to enable enhanced connectivity for Oracle's SQL*Net product.
- RSA Data Security, Inc. licenses encryption, key management, public key technology, and advanced key negotiation to CheckPoint.
- FTP Software, Inc. will embed FireWall-1 SecuRemote client encryption software into FTP Software's OnNet 32 connectivity solution.
- Cheyenne Software and CheckPoint are working together to integrate Cheyenne's InowLAN virus detection software into CheckPoint FireWall-1.
- Bay Networks and CheckPoint have a strategic alliance in which Bay integrates CheckPoint Fire Wall-1 into the Bay family of router platforms.
- Xylan Corporation and CheckPoint have entered into a partnership to create the first

firewall security LAN switch, and are working together to provide the first user-based secure virtual LANs.

Competition

CheckPoint's major competition comes from other network security providers, including Advanced Network and Service (a subsidiary of America Online), Border Technologies, Harris Corporation, Raptor Systems, Secure Computing, Sun Microsystems, and Trusted Information Systems, Inc.

The company also competes with companies focused on providing hardware and software to the enterprise network market, including Cisco Systems, Digital Equipment Corp., IBM, and Microsoft.

CheckPoint anticipates additional competition from other emerging and established companies such as AT&T, which recently announced that it intends to enter the network security market.

INPUT Assessment

CheckPoint Software's strengths include:

- Award winning products
- A leadership position (40% market share and an installed base of over 6000 customers) in the rapidly growing network security market
- A strong relationship with Sun Microsystems, Bay Networks, RSA Data Security, and Hewlett-Packard
- Explosive company growth and profitability
- Leveraged worldwide distribution

Challenges in the future include:

- Reducing its reliance on SunSoft for revenue
- The increasing competition in the network security market from startups and major industry players
- Improving existing products and introducing new products to maintain market leadership

David McGuire
Dropped 1/81

COMPANY HIGHLIGHT

CHEMSHARE CORPORATION
1900 Lummus Tower
Houston, TX 77056
(713) 627-8945

Michael L. McGuire, President
Private corporation
Total employees: 53
Total revenues, fiscal year end
12/31/77: \$4,000,000
Total computer services revenues:
\$2,000,000

THE COMPANY

- ChemShare was founded in 1969 as an independent engineering company to provide applications software products to the process manufacturing industry. In 1975, the company began to enter the construction market, which now generates approximately 50% of revenues. Construction is expected to be generating 75% of total revenues in fiscal 1982.
- Management expects revenues to increase to \$6,000,000 in 1978, an increase of 50% over 1977. However, less than half of these fiscal 1978 revenues will be generated by software products.
- ChemShare software is installed at approximately 450 companies. Its major competitor is Simulation Sciences, Inc., located in Fullerton, California.
- ChemShare has 53 employees distributed as follows:

- Computer Services	75%
Marketing	26%
Operations	49%
- Construction	25%
	100%
- The computer services marketing staff is expected to increase to 37% of the total by year end 1978.
- ChemDesign EVOP and Wilson-Strickland, Inc., are wholly owned subsidiaries of ChemShare:
 - ChemDesign EVOP (Evolutionary Operation for continuous profit improvement) is a management technique for improving efficiency and reducing costs in process manufacturing.
 - Wilson-Strickland, Inc. provides maintenance for storage tanks and pressure vessels.

September 1978

COMPANY HIGHLIGHT/CHEMSHARE CORPORATION

KEY PRODUCTS AND SERVICES

- All of ChemShare's computer services revenues are generated by the sale of its four proprietary applications software products: DESIGN/2000, REFINÉ, CHEMTRAN, and DISTILL. The software combines standard process operations with ChemShare's library of physical properties (pure components and thermodynamic correlations). The company claims the software can be used to simulate or design most units and processes, from low-temperature LNG systems to high-temperature refinery and chemical operations. The products can perform equilibrium, energy, entropy, and material balance calculations. Chemshare claims the products can be used to:
 - Develop more competitive process designs
 - Examine and evaluate design alternatives
 - Achieve lower design margins
 - Debottleneck process units
 - Evaluate bid specifications
 - Optimize energy usage
 - Conduct economic and process feasibility studies
 - Examine economic alternatives
 - Conduct complete flow sheet analyses
 - Simulate and predict results of various operational changes
- DESIGN/2000 is a process simulation program that, along with REFINÉ, will perform heat/material balance calculations for hydrocarbon and chemical processes. Both programs contain an integrated data base of thermodynamic correlations.
- CHEMTRAN, a multi-purpose physical properties program that provides CHEMical data TRANslation, automatically interfaces with DESIGN/2000 and REFINÉ.
- DISTILL is a generalized rigorous fractionator system, according to the company.
- ChemShare programs are available for purchase or lease and will operate on IBM equipment running under DOS or OS. They can also be accessed interactively through the following networks: Computer Sciences Canada, Ltd., Control Data Corporation, United Computing Systems, University Computing Company, and FIDES-Europe. These networks offer both low speed teletype terminals and high speed remote batch terminal access.

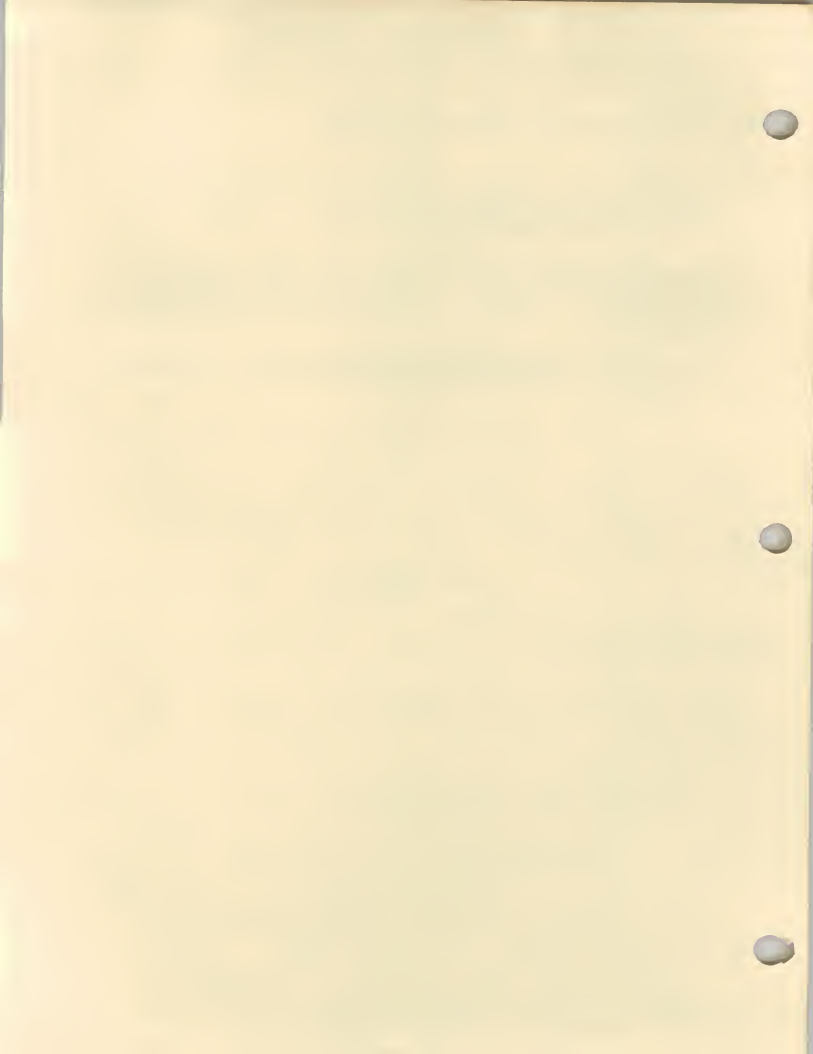
APPLICATIONS Scientific and Engineering

COMPANY HIGHLIGHT/CHEMSHARE CORPORATION

INDUSTRY MARKET More than 2,000 users in the process engineering departments of approximately 450 engineering/construction companies, consulting companies, or operating plants use ChemShare software.

GEOGRAPHIC MARKET Approximately 85% of total revenues were produced in the United States. Remaining revenues were generated in the United Kingdom, Germany, and the Netherlands. ChemShare's U.S. customers are widely distributed throughout the country.

COMPUTER HARDWARE AND SOFTWARE ChemShare does not have any in-house mainframes.



*Dropped
1/81*

COMPANY HIGHLIGHT

CHICAGO DATA SYSTEMS, INC.
2805 Butterfield Rd., Suite 150
Oak Brook, IL 60521
(312) 325-2960

John Ambler, President
Private
Total employees: 12
Total revenues, fiscal year end
7/31/78: \$500,000(E)

THE COMPANY

- Chicago Data Systems, Inc. (CDS) was incorporated in Illinois in December of 1975 by John Ambler and Dean Dardwin, (Vice President). It actually became operational in August of 1976 as a consulting software development and software product firm. It currently offers packaged software products and professional services. CDS sold its credit card software package and processing services to Becker & Mueller in March of 1978.
- Revenues increased 67% from approximately \$300,000 in fiscal 1977 to approximately \$500,000 in fiscal 1978.
- After 18 months of software development, the company is now offering several proprietary software packages: PROC/ANALYSIS, FLOWCHARTER, 3270 FAMILIARIZATION, KEYSORT, SECURE/IMS, and TEST/IMS. Marketing is handled through small market representatives and large software marketing companies. SECURE/IMS and TEST/IMS are currently being marketed by Software Module Marketing of Sacramento, CA. CDS is attempting to establish additional marketing relationships for its other software.
- Primary competition for PROC/ANALYSIS and FLOWCHARTER comes from Gulf Data Sciences, Data Directions, and Applied Data Research.

KEY PRODUCTS AND SERVICES

- Approximately half of CDS revenues are generated by the sale of its software product and half from professional services.
- CDS has developed and is marketing the following systems software packages:
 - PROC/ANALYSIS, with several installations, creates an information file using the PROC Library as input. It provides several reports on the PROCLIB, including a Data Set Cross-Reference listing. When used in conjunction with FLOWCHARTER, PROC/ANALYSIS provides an automated system level documentation vehicle for OS/VS data centers.
 - FLOWCHARTER, with several installations, is an OS/VS system utility which produces non-graphic flowcharts from the PROC Library.
 - CDS professional services include software development and consulting.

July 1978

COMPANY HIGHLIGHT/CHICAGO DATA SYSTEMS, INC.

- 3270 FAMILIARIZATION, with several installations, uses the MFS feature of IMS to provide operator training in the use of 3270 CRT equipment.
- KEYSORT, with several installations, is an internal sort for on-line or batch usage. Management claims it replaces the need for both multiple keys in data bases and customized internal sorts written by the programmers.
- SECURE/IMS, an interactive teleprocessing security monitor for IMS, was also first installed on July 1, 1978. It protects on-line data bases from unauthorized access over a company's teleprocessing network and produces hard-copy security audit reports.
- TEST/IMS, an on-line test system for IMS, was first installed on July 1, 1978. It includes session testing, parameter verification, status code checking, data base error handling, and isolation of the test and production environment.

APPLICATIONS CDS offers systems software products.

INDUSTRIES SERVED Software sales and consulting revenues are derived from the following industries:

Banking & finance
Distribution-retail & wholesale
Government-Federal & state
Insurance
Manufacturing-discrete & process
Services
Transportation
Utilities

GEOGRAPHIC MARKETS Less than one percent of CDS revenues are derived from outside the U.S. Consulting clients are primarily located in the Midwest. Software packages are installed throughout the U.S.

COMPUTER HARDWARE AND SOFTWARE CDS does not have any in-house hardware. It utilizes an outside service bureau for software development.

(4/15) 493-1600
pete Cunningham

Please Update

COMPANY HIGHLIGHT

MAR. 2 1 1979

CHICAGO DATA SYSTEMS, INC.
2805 Butterfield Rd., Suite 150
Oak Brook, IL 60521
(312) 325-2960

John Ambler, President
Private
Total employees: 42 ^G
Total revenues, fiscal year end
7/31/78: \$500,000 ^(B)
225,000

THE COMPANY

- Chicago Data Systems, Inc. (CDS) was incorporated in Illinois in December of 1975 by John Ambler and Dean Dardwin, (Vice President). It actually became operational in August of 1976 as a consulting software development and software product firm. It currently offers packaged software products and professional services. CDS sold its credit card software package and processing services to Becker & Mueller in March of 1978.
- Revenues increased ^{50%} 67% from approximately ^{150,000} \$300,000 in fiscal 1977 to approximately \$500,000 in fiscal 1978.
- After ²⁴ ~~18~~ months of software development, the company is now offering several proprietary software packages: PROC/ANALYSIS, ^{JOB/ANALYSIS, SLIDE} FLOWCHARTER, 3270 FAMILIARIZATION, KEYSORT, SECURE/IMS, and TEST/IMS. Marketing is handled through small market representatives, ^{JOB/CHARTER} and large software marketing companies. ~~SECURE/IMS and TEST/IMS are currently being marketed by Software Module Marketing of Sacramento, CA.~~ CDS is attempting to establish additional marketing relationships for its other software.
- Primary competition for PROC/ANALYSIS ^{JOB/CHARTER} and FLOWCHARTER comes from Gulf Data Sciences, Data Directions, and Applied Data Research.
CAPEX

KEY PRODUCTS AND SERVICES

- Approximately ^{2/3} half of CDS revenues are generated by the sale of its software product and ^{1/3} half from professional services.
- CDS has developed and is marketing the following systems software packages:

- PROC/ANALYSIS, with several installations, creates an information file using the PROC Library as input. It provides several reports on the PROCLIB, including a Data Set Cross-Reference listing. When used in conjunction with FLOWCHARTER, PROC/ANALYSIS provides an auto mated system level documentation vehicle for OS/VS data centers.
- FLOWCHARTER, with several installations, is an OS/VS system utility which produces non-graphic flowcharts from the PROC Library.
- CDS professional services include software development and consulting.

New Family of
Products for
JOB LIB - PROCLIB
See attached
Brochure

July 1978

COMPANY HIGHLIGHT/CHICAGO DATA SYSTEMS, INC.

- SLIDE

- 3270 FAMILIARIZATION, with several installations, uses the MFS feature of IMS to provide operator training in the use of 3270 CRT equipment.
- KEYSORT, with several installations, is an internal sort for on-line or batch usage. Management claims it replaces the need for both multiple keys in data bases and customized internal sorts written by the programmers.
- SECURE/IMS, an interactive teleprocessing security monitor for IMS, was also first installed on July 1, 1978. It protects on-line data bases from unauthorized access over a company's teleprocessing network and produces hard-copy security audit reports.
- TEST/IMS, an on-line test system for IMS, was first installed on July 1, 1978. It includes session testing, parameter verification, status code checking, data base error handling, and isolation of the test and production environment.

APPLICATIONS CDS offers systems software products.

INDUSTRIES SERVED Software sales and consulting revenues are derived from the following industries:

Banking & finance
Distribution-retail & wholesale
Government-Federal & state
Insurance
Manufacturing-discrete & process
Services
Transportation
Utilities

GEOGRAPHIC MARKETS Less than one percent of CDS revenues are derived from outside the U.S. Consulting clients are primarily located in the Midwest. Software packages are installed throughout the U.S.

COMPUTER HARDWARE AND SOFTWARE CDS does not have any in-house hardware. It utilizes an outside service bureau for software development.

COMPANY PROFILE

CIMLINC INC.
(formerly CADLINC Inc.)
700 Nicholas Boulevard
Elk Grove Village, IL 60007
(312) 228-7300

John H. West, President
Private Corporation
Total Employees: 230
Total Revenue, Fiscal Year End
9/30/87: \$35,000,000

The Company

CIMLINC Inc. was founded in 1981 by John West as CADLINC Inc. The company provides computer-integrated manufacturing (CIM) microcomputer turnkey systems to clients in the metalworking industry.

- During 1981 CADLINC merged its business with a portion of System Associates, Inc.'s Troy (MI) operations.
 - The merger included 10 System Associates employees with professional services experience in developing systems for factory automation, communications networks, NC machine control and parts programming, computer graphics, and post processors for major metalworking corporations.
- In November 1985 the company changed its name to CIMLINC to more accurately reflect the company's range of factory automation products.
- In September 1987 CIMLINC signed a nine-month initially exclusive OEM agreement valued at \$18 million with Sun Microsystems Inc. for CIMLINC to resell Sun-3 and Sun-4 engineering workstations with its software. The agreement and the port of CIMLINC application software to Sun Microsystems hardware has led to new business opportunities from CIMLINC, some of them in conjunction with Sun Microsystems itself.

Since 1981 CIMLINC has received over \$24 million in venture capital funding. Investors include Kleiner Perkins Caufield & Byers; Concord Partners; Cowen & Co.; Hambrecht & Quist; Prudential Bache; Robertson, Colman & Stephens; and several international investors.

Fiscal 1987 revenue reached \$35 million, a 52% increase over fiscal 1986 revenue of approximately \$23 million. A five-year revenue summary follows:

**CIMLINC INC.
FIVE-YEAR REVENUE SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR				
	9/87	9/86	9/85	9/84	9/83
Revenue	\$35,000	\$23,000	\$23,300	\$14,500	\$9,000
• Percent increase (decrease) from previous year	52%	(1%)	61%	61%	125%

CIMLINC management attributes the company's growth to its approach to CIM from the manufacturing (shop floor), instead of design perspective.

- Fiscal 1986 results were negatively impacted due a downturn in manufacturing operations throughout the country.

Competitors include Computervision (Prime), Applicon, McDonnell Douglas Information Systems Group, Calma, and IBM/Lockheed (CADAM).

Key Products and Services

One hundred percent of CIMLINC's fiscal 1987 revenue was derived from application software and turnkey systems.

- The company introduced its first turnkey system in December 1982. Prior to that time the majority of its revenue was derived from marketing its software as separate packages and from providing processing services.
- During 1987 CIMLINC replaced the proprietary microprocessor-based workstation component of its turnkey systems with Sun Microsystems workstations. As a result, a larger percent of future revenue will be generated from software and support services rather than from hardware sales.
- As of January 1988, CIMLINC had over 2,400 systems installed worldwide.

In July 1986 CIMLINC announced PowerCIM, its newest generation of CIM systems priced at one-third the cost of the company's previous systems.

- PowerCIM combines software applications with a modular workstation to integrate all phases of the manufacturing process, from design through production.
- The hardware component of PowerCIM is Sun Microsystems' Sun-3/60 workstation, which replaced the CIMLINC-built Modular Machine in 1987. Sun-3/60 runs all CIMLINC applications and supports CIMLINC's CIM SHELL user interface based on CIMLINC enhancements to Berkeley 4.3bsd UNIX. The workstations may be purchased from CIMLINC or directly from Sun Microsystems..
- Sun-3/60 workstations and the Modular Machine share many features, including: the Motorola 68020 microprocessor, MC 68881 floating point coprocessor, a 19-inch monitor with high resolution graphics, a minimum of 4Mbytes of RAM and a minimum of 141 Mbytes of hard disk storage, and multi-tasking and multi-user features.
- CIMLINC software is also available on other Sun-3 and Sun-4 workstations.
- Through either CIMLINC or Sun Microsystems, users are provided full communications capabilities through Ethernet (including TCP/IP protocols), all Intel Multibus architecture programs, IBM and DEC environments, and Manufacturing Automation Protocol (MAP).
- In addition to CIMLINC networking and communications applications, users can add Sun Microsystems features such as NeWS (Network-extensible Windowing System) and NFS (Network File System).
- Sun Microsystems' monochrome workstations with 4 Mbyte of RAM start at \$14,400. Color systems start at \$19,400. This includes a quarter-inch tape drive, a 141 Mbyte disk and an Ethernet interface.
- CIMLINC continues to build a factory hardened workstation (a version of the Modular Machine), called the Machine Manager, for factory-floor tasks. Tasks supported include direct numerical control, full or restricted access to engineering drawings, workstation communications, and all the functions available under UNIX. The Machine

Manager, which includes a 15-inch monochrome screen and an air-conditioned NEMA 12 enclosure, is priced from \$23,995.

- Software tools available with PowerCIM include the following:
 - CIM CAD, a graphics-based design, drafting, and detailing package, is priced at \$5,395.
 - CIM CAM, a graphics-based machine tool simulation program that transforms design drawings into numerical-control-oriented programs, is priced at \$7,795.
 - CIM SURF, for 3-D surface modeling, is priced at \$7,795.
 - CIM SOLID I, a 3-D modeling tool that can interact with CIM CAD, is priced at \$4,795.
 - CIM ID (Intelligent Documentation), a text and graphics document preparation system, is priced at \$4,795.
 - Avatar, an extension of CIM CAD that allows parametric design, is priced at \$3,595.
 - CIM COMM: SNA 3270, which enables CIMLINC's system to communicate with IBM 3270 host systems, is priced at \$12,495.
 - Communications, which enables CIMLINC's system to communicate with Ethernet networks, is priced at \$3,495.
 - CIM CMM, for off-line programming of inspection machines (coordinate measuring machines or CMMs) using the workpiece's original CAD data and the DMIS interface standard, is priced from \$11,995.
 - CIM CUT, for N/C programming of complex, multi-axis "sculptured" surfaces found in molds, dies, and aerospace parts (as if they were 3-axis parts - - interference-free), is priced from \$7,795.
 - Factory ID, a read-only version of CIM ID with a simplified operator interface for use on Machine Managers, is priced at \$2,395.
 - Factory CAD, a read-only version of CIM CAD with a simplified operator interface for use on Machine Managers, is priced at \$2,395.

- CIM VENDOR is a family of software packages for receiving two-dimensional and three-dimensional geometric data files from non-CIMLINC systems and making the data compatible with all other CIMLINC applications. In addition to IGES and VDA (in Europe), these range from simple IBM 3270 terminal emulations to translators for Applicon, CADAM, Calma, Computervision, and the automakers' proprietary design systems: Ford Standard, Chrysler Design Format, General Motors' CGS and INCA.

Support services offered by CIMLINC include the following:

- Training classes are available for each application area.
- An Application Engineering Support Contract, which may be purchased on a yearly basis, provides the user with telephone and on-site support for all applications and systems software updates, and continued training.
- CIMLINC acts as the initial point of contact for handling both software and hardware-related problems and coordinates with Sun to provide hardware maintenance services.

Industry Markets

One hundred percent of CIMLINC's fiscal 1987 revenue was from clients in the discrete manufacturing industry, primarily aerospace, automotive, and machine tool companies.

- Clients include General Motors, Ford Motor Company, Dresser Industries, Deere & Company, Rohr Industries, United Technologies Corporation, Cincinnati Milacron, Inc., Kearney & Trecker, Boeing Military Airplane Company, and Boeing Aerospace Company.

CIMLINC has an OEM agreement with Sun Microsystems to resell Sun-3 and Sun-4 workstations with CIMLINC software.

CIMLINC has launched a value-added dealer/value-added reseller (VAD/VAR) program to build additional channels of distribution. This has allowed CIMLINC to leverage its relationship with Sun Microsystems.

Geographic Markets

Approximately 85% of CIMLINC's fiscal 1987 revenue was derived from the U.S. and Canada. The remaining 15% was derived from European operations.

CIMLINC's headquarters and manufacturing facilities are in Elk Grove Village (IL).

- The company has an advanced development group in Menlo Park (CA) and an applications development group in Troy (MI).
- U.S. sales offices are located in Burlington (MA), Cleveland, Dallas, Greenville (SC), Milwaukee, Plymouth Meeting (PA), Troy (MI), Wichita (KS), Seattle, San Diego, and Los Angeles.
- International offices are located in West Germany and England. Scandinavia is handled through distributor agreements.

CIMLINC has initiated a major marketing thrust to add VADs and VARs in the Pacific Rim nations.

**Computer
Hardware and
Software**

CIMLINC has approximately 100 of its systems in use internally, primarily in Troy, Menlo Park, and Elk Grove Village.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Cincinnati Bell Information Systems Inc. (CBIS)

President & CEO: James F. Orr
COO: Robert J. Marino
600 Vine Street
Cincinnati, OH 45202
Phone: (513) 784-5900
Fax: (513) 784-5425
Internet: <http://www.cbis.com>



Status:	Subsidiary
Parent:	Cincinnati Bell Inc.
Employees:	2,262 (7/96)
Revenue:	\$373,900,000
Fiscal Year End:	12/31/95

Key Points

- CBIS provides customer care and billing services to the communications industry and is a leading supplier of billing systems to the cellular telecommunications industry.
- Through new contracts and extensions of existing relationships, more than 86% of CBIS's revenues come from long-term customer relationships.
- During 1995, CBIS signed several new contracts with key clients, including a \$100 million, five-year extension of its billing agreement with AT&T for business calling card services.
- In December 1995, CBIS acquired Information Systems Development Partnership, a provider of billing and customer management systems to the cable television industry.
- During early 1995, CBIS acquired the X International group of companies, expanding CBIS's offerings to include Global System for Mobile Communications (GSM) digital cellular technology, which is the

standard for new European digital mobile telephone services.

- In March 1995, CBIS announced the completion of a major expansion of capacity at its Orlando Data Center.

Company Description

CBIS is a leading provider of customer care and billing systems for the telecommunications industry. Information services include processing, software products, and custom development professional services.

More than 225 million bills for cable TV, wireless, and wireline telephony are produced by CBIS software and in CBIS's data centers each year.

During 1994, CBIS restructured its operations to better focus on its core business of providing high-volume billing and customer transaction solutions to wireless and wireline telecommunications companies. CBIS had divested several businesses not related to its billing services, including its professional services for the federal government and image and document management solutions for the banking and finance market.

Organization and Structure

CBIS is headquartered in Cincinnati. Additional U.S. offices are in Atlanta, Chicago, Ft. Lauderdale and Orlando (FL), Bedminster (NJ), Seattle (WA), and Washington, D.C.

International offices are in Slough and Bristol (England), Bern (Switzerland), and Utrecht (the Netherlands).

CBIS has established two Data Centers, located in Cincinnati (OH) and in the Orlando (FL) vicinity, to provide the technology,

environments, and support necessary to manage and process client data.

- Activities performed at these locations include billing, report generation and microfiche printing.
- In addition, CBIS provides value-added services above and beyond these activities, including performing extensive quality checks to provide revenue assurance and high print quality.
- The CBIS Data Centers are staffed by more than 350 operations and support personnel.

The company has constructed a new 125,000-square-foot office building and a 60,000-square-foot data center in the Lake Mary suburb of Orlando. This complex, which was completed in mid-1996, will house the more than 700 employees who are currently located in two separate facilities in Maitland.

James F. Orr was appointed President and CEO of CBIS in late 1994. Mr. Marino assumed COO responsibilities as of October 1, 1995.

To keep the company close and responsive to client needs, CBIS delivers services and solutions for its communications industry clients through three business organizations as follows:

- *Communications Solutions Group, David Stelzer - President.* Representative clients managed by this group include AT&T, AT&T Wireless Services (formerly McCaw Cellular), Unitel, and Cantel.
- *Telecom Solutions Group, Stephen L. Robertson - President.* All RBOCs, ITCs, non-AT&T/Unitel/Cantel wireless customers and other independent carriers are supported by this group. Representative

clients managed by this group include Sprint Cellular, SBC, Ameritech, Comcast, and Puerto Rico Telephone Corporation.

- *CBIS International Group, William R. Coleman - President.* Internationally based clients managed by this group include Swiss PTT, Telecom Australia, and PTT Netherlands.

Company Strategy

At the beginning of 1994, CBIS announced a strategic refocusing of its business to serve the communications industry. During 1994, the company substantially completed its disposal and restructuring plan by selling CBIS Federal and other businesses, closing its foreign data center (Monterrey, Mexico), eliminating other unprofitable domestic and international activities, and restructuring the remaining CBIS operations, including terminating employees.

CBIS's current strategy is to focus on billing solutions for leading companies in the wireless, wireline, and emerging communications services industries and to be the low-cost producer of value-added solutions.

The company intends to build on its leadership position by providing and managing billing solutions for major segments of the rapidly converging communications industry, including providers of video and data content services.

Financials

CBIS's 1995 revenues reached \$373.9 million, a 9% increase over 1994 revenue of \$343.8 million.

A five-year financial summary follows:

Cincinnati Bell Information Systems, Inc. Five-Year Financial Summary (\$ Millions)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue (a)	\$373.9	\$343.8	\$356.6	\$386.6	\$352.0
• Percent change from previous year	9%	(4%)	(8%)	10%	3%
Operating income (loss)	\$38.5	\$27.1	\$(124.6)	\$(11.8)	\$7.4
	(b)		(c)		

(a) Includes revenue from other operating units of Cincinnati Bell of \$39.4 million in 1995, \$40.5 million in 1994, \$46.9 million in 1993, \$58.7 million in 1992, and \$62.9 million in 1991.

(b) Includes special charges of \$7.5 million associated with in-process research and development costs in connection with acquisitions.

(c) Include expenses of \$88.6 million related to operations sold or closed and \$102 million in special charges related to restructuring and disposition of businesses.

CBIS management attributes 1995 results to the following:

- Strong subscriber growth in the cellular telecommunications market contributed to 19% domestic revenue growth—to \$343 million in 1995—as CBIS generated a record 140 million bills for wireless and wireline telecommunications companies.
- International revenues were down 50% to \$31 million, due to the completion of one contract in early 1995 and the delayed delivery of another contract.
- Operating expenses increased 4% in 1995, after excluding special items. Research and development expenses rose 43% to \$32 million. General and administrative expenses decreased in 1995 by \$8.5 million.

Revenue in 1994 increased by about 20% versus 1993 when 1993 figures are adjusted to exclude operations sold or closed (\$67.4 million). Revenue growth in 1994 was due primarily to more data processing and professional services provided to the cellular industry, and professional services contracts with international clients for development of telecommunication solutions.

- In connection with its plan to eliminate nonstrategic operations, during 1993 CBIS established a disposal and restructuring reserve of \$102 million (\$88 million after tax, or \$1.39 per common share) for special charges. Included in this amount was \$97.4 million related to the disposition of businesses and \$4.6 million related to the restructuring of other CBIS operations, including a reduction in its work force.
- The 1994 operating results of the businesses sold or closed during the year were charged to the disposal and

restructuring reserve; therefore, the revenues and costs and expenses of these businesses were not included in the 1994 reported amounts.

Interim Results

CBIS's revenue for the six months ending June 30, 1996 reached \$221.4 million, a 20% increase over \$184.7 million for the same period in 1995. Operating income reached \$36.3 million, up from \$20.2 million for the same period a year ago.

Revenue gains were attributed mainly to growth in business from long-term cellular, wireline, and international clients, and from cable TV clients following the acquisition of the Information Systems Development Partnership in late 1995.

Market Financials

Virtually 100% of CBIS's revenue is derived from the telecommunications industry.

Revenue from cellular clients was \$257 million (69% of revenue) in 1995, compared to \$198 million (58% of revenue) in 1994 and \$144 million (40% of revenue) in 1993.

- CBIS systems generate bills for cellular telephone customers in 23 of the 25 largest U.S. metropolitan areas.
- According to CBIS management, CBIS service bureaus handled approximately 30% of the U.S. cellular market in 1995, and, overall, CBIS systems supported nearly 50% of the U.S. cellular market.

CBIS's domestic clients are primarily cellular telephone providers and their resellers, cable television operators, interexchange carriers, independent telephone companies, and regional Bell operating companies.

Internationally, CBIS's clients primarily include Post, Telegraph and Telephone (PTT) organizations, mobile telecommunications providers and their resellers, and new competing networks. In the U.K., CBIS Ltd. is an ISO-9001-certified supplier with TickIT accreditation.

Geographic Markets

Approximately 92% (\$343 million) of CBIS's 1995 revenue was derived from the U.S., up from \$283 million in 1994. The remaining 8% (\$31 million) was derived from international sources, including Europe.

Acquisitions

In December 1995, CBIS acquired the Information Systems Development Partnership (ISD), a provider of billing and customer management systems to the cable television industry, serving nearly seven million homes. Terms of the transaction were not disclosed.

- ISD is a privately held partnership of Cox Communications, Inc., Comcast Corporation, and ISD's senior management.
- The acquisition strengthens and broadens CBIS's position in customer care and billing for the communications industry to include cable television. ISD systems support some of the nation's largest cable systems, including systems operated by Comcast, Cox, Time Warner, and Western Communications. They also support many regional cable providers throughout North America and in Europe.
- ISD's newest system, CableMaster™ 2000, is a multiservice billing solution for the cable industry. It has advanced relational database technology that allows cable company employees in different locations

to see and retrieve the same up-to-date customer information.

In March 1995, CBIS acquired the X International group of companies—XI Services, Ltd. and XI Systems, Ltd.—of Bristol (England).

- X International provides software and services for a range of telecommunications companies, including business solutions to support mobile service providers and GSM operators, and products supporting paging, wireline, cable, cellular resellers, and intelligent networks.
- The acquisition expands CBIS's capabilities in the international mobile communications market by adding GSM product capabilities.
- As a result of the acquisition, X International's 32 employees have become employees of CBIS Ltd.
- CBIS Ltd. will immediately begin the international marketing of this newly acquired line of turnkey billing solutions and services under the name CBIS Advantage.

Divestitures

During 1994, CBIS sold several businesses for approximately \$16 million.

In December 1994, CBIS sold its banking business unit to Fiserv, Inc. Terms of the sale were not disclosed. The banking business unit, located in Maitland (FL) with 38 employees, provides image and document management solutions to the banking and financial services industry. Its products enable financial institutions to produce easy-to-read checking account statements for customers, to simplify the check

verification process, and to store and retrieve imaged information.

In November 1994, CBIS sold its CBIS Federal subsidiary to DynCorp of Reston (VA). CBIS Federal provided systems integration, systems operations, and professional services to the federal government.

In July 1994, CBIS sold its CMS Division to CommSys Corporation of Fairfax (VA).

- The software products included in the sale were the Communications Management System (CMS) line of applications for telemanagement and the CMS Billing System.
- The sale affected 38 employees in CBIS's Fairfax offices.
- CommSys, a newly formed, privately owned corporation, is using the CMS Billing System to support customers in the long-distance resale carrier market.

Employees

As of December 1995, CBIS had approximately 2,200 employees worldwide.

CBIS currently has 2,262 employees, the majority of which are U.S. based.

Key Products and Services

Formed in 1983 from the data processing department of Cincinnati Bell Telephone, CBIS has extensive experience in developing solutions for the communications industry.

CBIS's software products are available for license and as processing services via CBIS's Data Centers. CBIS provides these services primarily through long-term contracts ranging in length from three to ten years.

The company's current product list includes the following:

- Precedent 2000® is CBIS's next-generation family of business management solutions for the wireless industry. Consisting of six base modules—Customer Acquisition/Customer Service, Usage Processing, Finance, Billing, Pricing, and Collections—Precedent 2000 reportedly offers clients four key advantages when acquiring, managing, or billing customers:
 - Reduced operating costs
 - Speed to market with new products and services
 - Improved handling of service complexities
 - Exceptional management of a growing base of customers
- CBIS Advantage™ is a new, third-generation, real-time solution set for wireless billing and administration developed specifically for GSM and international analog network operators and service providers.
 - CBIS Advantage provides system flexibility, real-time rating and a modular platform architecture to efficiently handle increasing subscriber and message volumes.
 - Its modular configuration allows network operators to choose the system components that are specifically needed, such as Customer Administration, Billing, Provisioning, Collection, Rating, Repricing, Payment Processing, Credit Control, the Subscriber Identity Module (SIM), and the GSM Roaming Module (TAP).

- The Flexible Document Presentation System (FDPS) is a document formatting tool that enables service providers to highly individualize customer documents and more effectively communicate and interact with customers. FDPS capabilities and features include an adaptable design for documents, pages, and data elements; automatic page break and format; a graphical user interface; simultaneous target marketing campaigns; and multilingual support.
- Switch Manager 5 is a provisioning application that allows wireless billing systems automatically to activate wireless switches, Home Location Registers, Voice Recognition Units, paging terminals, Positive Roamer Verification systems, and other network elements. Switch Manager 5 benefits include increased system performance, greater hardware scalability, easier code modifications, and a simpler physical network operations environment.
- CDPD combines CBIS's wireless billing system with accounting server applications to provide a real-time data collection device for formatting and distributing CDPD records. CBIS's CDPD solution combines billing in the back end with a front-end, UNIX-based product for CDPD usage acquisition and distribution.
- The CableMaster 2000 Subscriber Management and Billing Solution was developed specifically for the cable industry. Since its introduction in 1982, the system has been installed in nine countries and manages nearly eight million subscribers.
- ICOMS (Integrated Communications Operations Management System) is a multiservice, fully integrated subscriber

management and billing system that adds cable telephony capabilities to CableMaster's functionality. It runs on IBM midrange hardware.

CBIS also supplies a range of services to support its software development projects, including the following:

- Consulting
- Transition and migration planning
- Migration and integration services
- System customization
- Installation
- Documentation and training
- Maintenance

Contracts

In July 1996, CBIS and Sprint Spectrum L.P. signed a five-year contract with a value Sprint Spectrum estimates will likely exceed \$200 million. Sprint Spectrum will deploy CBIS's Precedent 2000 wireless business management solution for its Personal Communications Services (PCS) network.

In July 1996, CBIS announced a three-year contract renewal with Motorola Cellular Services, Inc. for cellular customer care and billing.

In June 1996, CBIS signed a seven-year outsourcing contract renewal with Comcast Cellular Communications Inc. of Philadelphia to provide cellular telephone customer care and billing support.

In June 1996, CBIS announced it would implement its Integrated Communications Operations Management System for SBCC, a division of TeleWest, plc, the largest cable TV operator in the U.K.

In March 1996, CBIS announced a five-year agreement with AT&T to provide billing services to support AT&T's entrance into the

local telephony market. CBIS will provide data processing, software development, and professional consulting services.

In March 1996, CBIS announced a seven-year contract with North American Wireless, Inc. (NAWI) whereby CBI will provide NAWI with PCS customer care and billing services using Precedent 2000.

In July 1995, CBIS signed a multiyear contract with Sprint Cellular Company under which CBIS will process Sprint's CDPD billing information at CBIS data centers in a service bureau environment.

In July 1995, CBIS was awarded a four-year contract valued at approximately \$36 million to enhance and support Cantel's current Cellware billing and customer care system.

In November 1994, CBIS was chosen by the North American Cellular Network (NACN)—a wholly owned subsidiary of McCaw Cellular—to participate in its international roaming call delivery service.

- NACN is an organization that provides call delivery service to more than 50 cellular carriers throughout the U.S. and Canada and the international roaming facilities of GSM digital networks in nearly 30 countries around the world.
- CBIS provides NACN clearinghouse functionality and integrated message processing. In locations where CBIS's Macro/Cell system is used for actual bill production, CBIS also provides a fully integrated cellular bill.

In September 1994, CBIS was awarded a contract to provide a custom billing system for Unitel Communications of Toronto.

In September 1994, CBIS received a renewal contract from First Cellular Omaha to provide billing and other information management services using CBIS's Cellware software.

In August 1994, CBIS received a contract renewal from McCaw Cellular (now AT&T Wireless Services) through 1999, whereby CBIS is the exclusive provider of billing and related services for McCaw's cellular subscribers in the U.S. The contract is expected to generate revenues in excess of \$600 million. The contract also includes a provision that would allow McCaw to use CBIS's next-generation billing management solution, Precedent 2000.

Clients

Major clients include AT&T, AT&T Wireless Services (formerly McCaw Cellular) Ameritech Cellular Services, Bay Area Cellular, British Telecom, Cantel, Centennial Cellular, Cincinnati Bell Telephone, Comcast, Cox Broadcasting, MATRIX Marketing, Mercury One 2 One, MTel, Nippon Telephone & Telegraph, PCS PrimeCo, PTT Telecom Netherlands, Puerto Rico Telephone Corporation, Southwestern Bell Mobile Systems, Sprint Cellular, Swiss Telecom PTT, Telecom Australia, 360° Communications, Time Warner, Unitel, Videotron, and Westlink.

Marketing and Sales

CBIS primarily markets its services through a direct sales force.

Alliances

CBIS has numerous alliances/marketing agreements with various vendors, including the following strategic partners:

- Hewlett-Packard
- Independence Technologies
- Oracle
- Persistence
- Sun Microsystems
- Tandem Telecom

In March 1996, CBIS and Coral Systems, Inc. announced a joint marketing agreement under which CBIS will provide Coral Systems' FraudBuster and ChurnAlert solutions to CBIS's service bureau clients for fraud prevention.

Competitors

CBIS competitors include ALLTEL Information Services, AMDOCS, American Management Systems, Andersen Consulting, Computer Sciences Corporation, and EDS. Competition also comes from solutions developed "in-house."

Assessment

CBIS has established long-term relationships for billing and customer care support with several major companies in the emerging PCS industry.

- These include the top three holders of A and B licenses awarded for PCS, with two-thirds (by population) of the A and B licenses awarded, extending CBIS's service bureau coverage to 49 of the nation's largest wireless markets.
- CBIS also will support AT&T's billing and customer care requirements as it re-enters the market for local telephone services.

Parent Company

Cincinnati Bell Inc.
201 East Fourth Street
P.O. Box 2301
Cincinnati, OH 45201
Phone: (513) 397-9900
Total Revenue (12/31/95): \$1,336.1 million

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1995

Cincinnati Bell Information Systems Inc. (CBIS)

President & CEO: James F. Orr
COO: Robert J. Marino
600 Vine Street
Cincinnati, OH 45202
Phone: (513) 784-5900
Fax: (513) 784-5425

CBIS®

Status:	Subsidiary
Parent:	Cincinnati Bell Inc.
Employees:	2,200
Revenue:	\$343,800,000
Fiscal Year End:	12/31/94

its billing services, including its professional services for the federal government (CBIS Federal) and image and document management solutions for the banking and finance market.

Key Points

- In February 1994, CBIS announced plans to restructure its operations to better focus on its core business of providing high-volume billing and customer transaction solutions to wireless and wireline telecommunications companies.
- During 1994, CBIS substantially completed its disposal and restructuring plan by divesting several businesses not related to

- In November 1995, CBIS announced plans to acquire Information Systems Development Partnership, a provider of billing and customer management systems to the cable television industry.
- During early 1995, CBIS acquired the X International group of companies, expanding CBIS' offerings to include Global System for Mobile Communications (GSM) digital cellular technology, which is the

standard for new European digital mobile telephone services.

- In August 1994, CBIS received a major contract renewal through 1999 with McCaw Cellular, valued at more than \$600 million.

Company Description

CBIS is a leading provider of customer care and billing systems for the telecommunications industry. Information services include processing, software products and custom development professional services.

More than 117 million wireless bills and more than 31 million wireline bills are produced by CBIS software and in CBIS' advanced data centers each year.

Organization and Structure

CBIS is headquartered in Cincinnati. Additional U.S. offices are in Chicago, New York, Orlando (Maitland), Seattle and Washington, D.C.

International offices are in Bern (Switzerland) and Utrecht (The Netherlands).

CBIS has established two Data Centers, located in Cincinnati (OH) and in the Orlando (FL) vicinity, to provide the technology, environments and support necessary to manage and process client data.

- Activities performed at these locations include billing, report generation and microfiche printing.
- In addition, CBIS provides value-added services above and beyond these activities, including performing extensive quality checks to provide revenue assurance and high print quality.

- The CBIS Data Centers are staffed by more than 350 operations and support personnel.

The company is presently constructing a new 125,000-square-foot office building and a 60,000-square-foot data center in the Lake Mary suburb of Orlando. This complex, which is expected to be completed by mid-1996, will house the more than 700 employees who are currently located in two separate facilities in Maitland.

James F. Orr was appointed President and CEO of CBIS in late 1994. Mr. Marino assumed COO responsibilities as of October 1, 1995.

To keep the company close and responsive to client needs, CBIS delivers services and solutions for its communications industry clients through three business organizations as follows:

- *Communications Solutions Group, David Stelzer - President.* Representative clients managed by this group include AT&T, AT&T Wireless Services (formerly McCaw Cellular), Unitel and Rogers Cantel.
- *Telecom Solutions Group, Mark R. Rhode - President.* All RBOCs, ITCs, non-AT&T/Unitel/Cantel wireless customers and other independent carriers are supported by this group. Representative clients managed by this group include Sprint Cellular, SBC, Ameritech, Comcast and Puerto Rico Telephone Corporation.
- *CBIS International Group, John J. Pendray - President.* Internationally based clients managed by this group include Swiss PTT, Telecom Australia and PTT Netherlands.

Company Strategy

At the beginning of 1994, CBIS announced a strategic refocusing of its business to serving the communications industry. During 1994, the company substantially completed its disposal and restructuring plan by selling CBIS Federal and other businesses, closing its foreign data center (Monterrey, Mexico), eliminating other unprofitable domestic and international activities and restructuring the remaining CBIS operations, including terminating employees.

CBIS' current strategy is to focus on billing solutions for leading companies in the wireless, wireline and emerging communications services industries and to be the low-cost producer of value-added solutions.

The company intends to build on its leadership position by providing and managing billing solutions for major segments of the rapidly converging communications industry, including providers of video and data content services.

Financials

CBIS' 1994 revenues were \$343.8 million, compared to \$356.6 million in 1993.

- In connection with CBIS' plan to eliminate non-strategic operations, during 1993, CBIS established a disposal and restructuring reserve recorded \$102 million (\$88 million after tax, or \$1.39 per common share) of special charges. Included in this amount was \$97.4 million related to the disposition of businesses and \$4.6 million related to the restructuring of other CBIS operations, including a reduction in its work force.
- The 1994 operating results of the businesses sold or closed during the year were charged to the disposal and restructuring reserve; therefore, the revenues and costs and expenses of these businesses were not included in the 1994 reported amounts.
- Revenues from continuing operations increased about 20% in 1994 when compared to 1993, after excluding 1993 amounts related to operations sold or closed during 1994. Revenues for these operations in 1993 were \$67.4 million.
- A five-year financial summary follows:

**Cincinnati Bell Information Systems, Inc.
Five-Year Financial Summary
(\$ Millions)**

Item	Fiscal Year				
	1994	1993	1992	1991	1990
Revenue (a)	\$343.8	\$356.6	\$386.6	\$352.0	\$341.0
• Percent change from previous year	(4%)	(8%)	10%	3%	18%
Operating income (loss)	\$27.1	\$(124.6)	\$(11.8)	\$7.4	\$50.9

(a) Includes revenue from other operating units of Cincinnati Bell of \$40.5 million in 1994, \$46.9 million in 1993, \$58.7 million in 1992, \$62.9 million in 1991 and \$63.8 million in 1990.

CBIS management attributes 1994 results to the following:

- Revenue growth in 1994 from continuing operations was primarily the result of more data processing and professional services provided to the cellular industry and professional services contracts with international clients for development of telecommunications solutions.
- Cost and expenses were \$316.7 million in 1994, compared to \$481.2 million in 1993. Amounts for 1993 include expenses of \$88.6 million related to operations to be sold or closed and \$102 million in special charges.

The decrease in revenues in 1993 compared to 1992 was primarily in professional and consulting services, as a result of the completion of the NTT project in 1992, causing a reduction of \$21 million; and a decision in late 1992 by the IRS not to renew a data processing support contract, which resulted in lower revenues of \$28 million. The decreases were partially offset by higher revenues of \$19.1 million from international clients and data processing services for cellular clients.

Interim Results

Revenue for the nine months ending September 30, 1995 reached \$225.8 million, a 9% increase over \$253.0 million for the same period in 1994. Results were attributed to exceptional growth in cellular subscribers.

Market Financials

Virtually 100% of CBIS' revenue is derived from the telecommunications industry.

CBIS' target markets both domestically and internationally consist of companies in

wireless, wireline and emerging communications services.

Geographic Markets

Approximately 82% (\$282.9 million) of CBIS' 1994 revenue was derived from the U.S. and the remaining 18% from international sources, including Europe.

Acquisitions

In November 1995, CBIS agreed to acquire Information Systems Development Partnership (ISD), a provider of billing and customer management systems to the cable television industry, serving nearly seven million homes. Terms of the transaction were not disclosed.

- ISD is a privately held partnership of Cox Communications, Inc., Comcast Corporation and ISD's senior management.
- The acquisition expands CBIS' offerings to the cable billing market. ISD systems support some of the nation's largest cable systems, including systems operated by Comcast, Cox, Time Warner and Western Communications. It also supports many regional cable providers throughout North America and in Europe.
- ISD's newest system, CableMaster™ 2000, has advanced relational database technology that allows cable company employees in different locations to see and retrieve the same up-to-date customer information.

In March 1995, CBIS acquired the X International group of companies—XI Services, Ltd. and XI Systems, Ltd.—of Bristol (England).

- X International provides software and services for a range of telecommunications

companies, including business solutions to support mobile service providers and GSM operators, and products supporting paging, wireline, cable, cellular resellers and intelligent networks.

- The acquisition expands CBIS' capabilities in the international mobile communications market by adding GSM product capabilities.
- As a result of the acquisition, X International's 32 employees have become employees of CBIS Ltd.
- CBIS Ltd. will immediately begin the international marketing of this newly acquired line of turnkey billing solutions and services under the name CBIS Advantage.

Divestitures

During 1994, CBIS sold several businesses for approximately \$16 million.

In December 1994, CBIS sold its banking business unit to FIServ, Inc. Terms of the sale were not disclosed. The banking business unit, located in Maitland (FL) with 38 employees, provides image and document management solutions to the banking and financial services industry. Its products enable financial institutions to produce easy-to-read checking account statements for customers, to simplify the check verification process and to store and retrieve imaged information.

In November 1994, CBIS sold its CBIS Federal subsidiary to DynCorp of Reston (VA). CBIS Federal provided systems integration, systems operations and professional services to the federal government.

In July 1994, CBIS sold its CMS Division to CommSys Corporation of Fairfax (VA).

- The software products included in the sale were the Communications Management System (CMS) line of applications for telemanagement and the CMS Billing System.
- The sale affected 38 employees in CBIS' Fairfax offices.
- CommSys, a newly formed, privately owned corporation, is using the CMS Billing System to support customers in the long-distance resale carrier market.

Employees

As of December 1994, CBIS had approximately 2,200 employees worldwide.

CBIS currently has approximately 2,200 employees, the majority of which are U.S. based.

Key Products and Services

Formed in 1983 from the data processing department of Cincinnati Bell Telephone, CBIS has extensive experience in developing solutions for the communications industry.

CBIS' software products are available for license and as processing services via CBIS' Data Centers.

The company's current product list includes the following:

- Precedent 2000® is CBIS' next-generation family of business management solutions for the wireless industry. Consisting of six base modules—Customer Acquisition/Customer Service, Usage Processing, Finance, Billing, Pricing, and Collections—Precedent 2000 reportedly

offers clients four key advantages when acquiring, managing or billing customers:

- Reduced operating costs
- Speed to market with new products and services
- Improved handling of service complexities
- Exceptional management of a growing base of customers
- CBIS Advantage™ is a new, third-generation, real-time solution set for wireless billing and administration developed specifically for GSM and international analogue network operators and service providers.
- CBIS Advantage provides system flexibility, real-time rating and a modular platform architecture to efficiently handle increasing subscriber and message volumes.
- Its modular configuration allows network operators to choose the system components that are specifically needed, such as Customer Administration, Billing, Provisioning, Collection, Rating, Repricing, Payment Processing, Credit Control, the Subscriber Identity Module (SIM) and the GSM Roaming Module (TAP).
- The Flexible Document Presentation System (FDPS) is a document formatting tool that enables service providers to highly individualize customer documents and more effectively communicate and interact with customers. FDPS capabilities and features include an adaptable design for documents, pages and data elements; automatic page break and

format; a graphical user interface; simultaneous target marketing campaigns; and multilingual support.

- Switch Manager 5 is a provisioning application that allows wireless billing systems to automatically activate wireless switches, Home Location Registers, Voice Recognition Units, paging terminals, Positive Roamer Verification systems and other network elements. Switch Manager 5 benefits include increased system performance, greater hardware scalability, easier code modifications and a simpler, physical network operations environment.
- CDPD combines CBIS' wireless billing system with accounting server applications to provide a real-time data collection device for formatting and distributing CDPD records. CBIS' CDPD solution combines billing in the back end with a front-end, UNIX-based product for CDPD usage acquisition and distribution.

CBIS also supplies a range of services to support its software development projects, including the following:

- Consulting
- Transition and migration planning
- Migration and integration services
- System customization
- Installation
- Documentation and training
- Maintenance

Contracts

In July 1995, CBIS signed a multiyear contract with Sprint Cellular Company under which CBIS will process Sprint's CDPD billing information at CBIS data centers in a service bureau environment.

In July 1995, CBIS was awarded a four-year contract valued at approximately \$36 million to enhance and support Rogers Cantel Inc.'s current Cellware billing and customer care system.

In November 1994, CBIS was chosen by the North American Cellular Network (NACN)—a wholly owned subsidiary of McCaw Cellular—to participate in its international roaming call delivery service.

- NACN is an organization that provides call delivery service to more than 50 cellular carriers throughout the U.S. and Canada and the international roaming facilities of GSM digital networks in nearly 30 countries around the world.
- CBIS provides NACN clearinghouse functionality and integrated message processing. In locations where CBIS' Macro/Cell system is used for actual bill production, CBIS also provides a fully integrated cellular bill.

In September 1994, CBIS was awarded a contract to provide a custom billing system for Unitel Communications of Toronto.

In September 1994, CBIS received a renewal contract from First Cellular Omaha to provide billing and other information management services using CBIS' Cellware software.

In August 1994, CBIS received a contract renewal from McCaw Cellular (now AT&T Wireless Services) through 1999, whereby CBIS is the exclusive provider of billing and related services for McCaw's cellular subscribers in the U.S. The contract is expected to generate revenues in excess of \$600 million. The contract also includes a provision that would allow McCaw to use

CBIS' next generation billing management solution, Precedent 2000.

Clients

Major clients include AT&T, AT&T Wireless Services (formerly McCaw Cellular) Ameritech Cellular Services, Bay Area Cellular, British Telecom, Centennial Cellular, Cincinnati Bell Telephone, Comcast, MTel, Nippon Telephone & Telegraph, Puerto Rico Telephone Corporation, PTT Netherlands, Rogers Cantel, Southwestern Bell Mobile Systems, Sprint Cellular, Swiss PTT, Telecom Australia, TELUS and Unitel.

Marketing and Sales

CBIS primarily markets its services through a direct sales force.

Alliances

CBIS has numerous alliances/marketing agreements with various vendors, including the following strategic partners:

- Hewlett-Packard
- Independence Technologies
- Oracle
- Persistence
- Sun Microsystems
- Tandem Telecom

Competitors

CBIS competes primarily with other software development companies, such as EDS and American Management Systems. Competition also comes from solutions developed "in-house."

Parent Company

Cincinnati Bell Inc.
201 East Fourth Street
P.O. Box 2301

Cincinnati, OH 45201

Phone: (513) 397-9900

Total Revenue (12/31/94): \$1,228.2 million

**CINCINNATI BELL
INFORMATION SYSTEMS INC.**

600 Vine Street
P.O. Box 1638
Cincinnati, OH 45201
Phone: (513) 784-5900
Fax: (513) 784-5425

President & CEO:	Sheldon Horing
Status:	Wholly Owned Subsidiary
Parent:	Cincinnati Bell Inc.
Total Employees:	3,900 (11/93)
Total Revenue:	\$424,931,000
Fiscal Year End:	12/31/92

Key Points

- Cincinnati Bell Information Systems (CBIS[®]) primarily targets the government and financial services markets through its Systems Integration Group and the communications market through its Communications Systems Group.
- CBIS is developing CBIS Edge[™], its latest generation of telecommunications and mobile communications management software that will incorporate open systems standards and a client/server architecture.
- CBIS claims its systems support as much as two-thirds of the North American cellular market.
- During 1992, the IRS did not renew its automated data processing support services contract with CBIS, resulting in one-time charges of \$5.9 million to 1992 income.
- In April 1993, CBIS was awarded a five-year, \$41 million contract by the Department of Transportation to manage its computer center.
- CBIS is in the process of consolidating its operations outside North America into a single business unit.

Company Description

CBIS provides a range of processing and systems operations services, software products, and professional services, primarily to telecommunications and cellular companies, financial services firms, and to federal, state and local government clients. CBIS also provides its products and services to other operating units of its parent, Cincinnati Bell Inc.

Strategy

CBIS' strategy is to be globally recognized as the highest quality, leading provider of strategic information management solutions in selected segments of the communications, federal government, and other targeted markets.

Financials

CBIS' total 1992 revenue reached \$424.9 million, a 12% increase over 1991 revenue of \$380.7 million.

- Included in CBIS' results is captive revenue from other Cincinnati Bell units of approximately \$62.1 million, \$68.6 million, and \$63.8 million for 1992, 1991, and 1990, respectively.
- The results for 1992 include one-time charges of \$7 million associated with restructuring and consolidating operations in Europe and write-offs of \$5.9 million in unamortized contract acquisition and other costs associated with the non-renewal of an Internal Revenue Service contract for processing support services.

A three-year financial summary follows:

**CINCINNATI BELL INFORMATION SYSTEMS INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR		
	1992	1991	1990
Revenue	\$424.9	\$380.7	\$362.2
• Percent change from previous year	12%	5%	19%
Operating income (loss)	\$(11.8)	\$7.4	\$50.9
• Percent change from previous year	(a) (259%)	(b) (85%)	N/A

- (a) Includes one-time charges of \$12.9 million for restructuring European operations and nonrenewal of an IRS contract.
- (b) During 1991, CBIS redirected development of certain software for cellular mobile communications companies, resulting in a write-down of capitalized software costs, decreasing net income by approximately \$12.9 million.

Market Financials

CBIS' U.S. noncaptive revenue for 1992 was derived primarily from telecommunications and cellular firms; federal, state, and local government; and financial services institutions.

Geographic Markets

Approximately \$295 million of CBIS' \$363 million in noncaptive revenue for 1992 was derived from the U.S. and the remainder from international sources.

CBIS is headquartered in Cincinnati (OH) and has additional U.S. offices in Fairfax (VA), Itasca (IL), Maitland (FL), Piscataway (NJ), and Bellevue (WA).

CBIS Europe is headquartered in Belgium, with additional offices in Germany and the U.K.

Other international offices are in Australia, Japan, the Philippines, and Mexico.

**Organization/
Structure**

CBIS' business operations are organized into two primary groups and several support groups as follows:

- The Communications Systems Group, with approximately 1,900 employees, provides processing and professional services and software products to telephone, cellular, and paging companies worldwide. CBIS is the leading supplier of cellular billing and customer support systems in North America, including four of the nine cellular regions in Mexico.
- The Systems Integration Group, with approximately 1,500 employees, serves the two major CBIS markets outside the telecommunications industry—financial services and government. This unit provides image processing solutions to banks and image processing, network integration, professional services, and systems operations services to federal, state, and local government.
- CBIS is in the process of combining the operations of the following two international units:
 - CBIS International Group, with 270 employees, markets and supports CBIS' products and services outside of North America and Europe and supports CBIS' long-term project with Nippon Telegraph and Telephone (NTT).

- CBIS Europe Group, with 230 employees, was formed in late 1990 to capture telecommunications and information services opportunities in European markets.

Acquisitions

Since 1985, CBIS has made several acquisitions which have increased its revenue and expanded its product and service offerings. Most recent acquisitions include the following:

- In December 1990, CBIS acquired Federal Information Technologies, Inc. (FIT) of Fairfax (VA), a privately held systems integration, engineering, and development company specializing in communications and computer systems for the federal government. FIT's operations have been merged into CBIS' Systems Integration Group.
- In August 1990, CBIS acquired certain assets of a division of OAO Corporation, including a seven-year automated data processing (ADP) support services contract with the IRS. This contract was not renewed in 1992.

Key Products and Services

INPUT estimates that CBIS' 1992 noncaptive U.S. revenue was \$295 million, segmented as follows:

Systems integration	33%
Professional services	30%
Processing	21%
Software products	12%
Systems operations (FM)	4%
	100%

Communications Systems Group:

CBIS' wireless business operations, with 700 employees, provide processing services and applications software products for customer account management and customer billing to cellular telephone companies and radio paging providers.

- In cellular (or wireless) communications, CBIS issued more than 50 million bills during 1992. This represents approximately 40% of the cellular subscribers in the U.S. Combining this service bureau work and bills produced by other providers with CBIS software, approximately two-thirds of all North American cellular subscriber bills are delivered through CBIS software.

- CBIS is developing CBIS Edge™, its latest generation of telecommunications and mobile communications management software that will incorporate open systems standards, client/server architecture, object-oriented and structured analysis design and development, a layered application architecture, and an integrated application development environment.
- New CBIS products targeted to wireless communications providers include the following:
 - Bill Information Retrieval System (BIRS) is an optical storage and retrieval system that allows customer service representatives to view on-line an exact replica of a customer's bill.
 - Chrysalis is the first CBIS effort developed for the wireless industry using CBIS Edge technology. Chrysalis will migrate basic, customer service on-line functionality supplied by Macro/Cell and Cellware legacy billing systems into a more efficient, common, PC-based graphical environment.
 - Project 2000 is an internal program name for CBIS' next-generation family of business management solutions under development for the wireless industry that features open systems and distributed processing, graphical user interfaces, real-time processing, and relational data base technologies. Project 2000 consists of six base modules--Customer Acquisition/Customer Service, Usage Processing, Finance, Billing, Pricing, and Collections. Project 2000 will be available via service bureau processing and for in-house licensing.
- The company also offers the following systems, which are available as software products or processing services:
 - ASAP™(Automated Switch Accounting Process) sends call detail data electronically to the billing system.
 - Cellware®, developed by CBIS in 1983, was the first software system for processing cellular subscriber bills. It is an integrated mobile information management system that provides message processing, customer accounts management, and equipment billing.
 - COMPU CELLULAR®, developed by Auxton Computer Enterprises of Maitland (FL) and acquired by CBIS in 1987, is an on-line, interactive system that provides subscriber information management; message, airtime, and toll rating; bill preparation; and payment processing.

- COMPTech Management System is a billing management system for radio common carriers/paging providers.
- DCRS (Dealer Commission Reporting System) calculates and reports dealer commissions.
- CREDIGRANT is an on-line credit application processing system to determine the credit-worthiness of mobile subscribers.
- Integrated Cellular Management System (ICMS) is similar to COMPU CELLULAR, but for smaller systems for RSA (rural service area) carriers. ICMS provides RSA carriers with customer records management, order processing, message processing, bill preparation and inquiry, and customer payment control and cash management.
- Macro/Cell[®], developed by Cellular Business Systems of Chicago (IL) and acquired by CBIS in 1986, is an integrated message processing, accounts management, and subscriber billing system originally targeted to nonwireline carriers.
- The CBIS Point-of-Sale system is a retail management system for cellular equipment and services that integrates administrative, marketing, and training functions.
- Switch Manager manages mobile telephone switching office operations.
- CBIS also offers three software products from Group 1 Software for bulk mail processing.
- In September 1993, CBIS was awarded a four-year, \$50 million contract renewal with Ameritech Mobile Communications to provide Ameritech with Cellware and Switch Manager billing and customer service applications in a service bureau environment.
- In 1992, CBIS signed major multiyear contracts for billing with Centel Cellular, McCaw Cellular Communications, and Comcast Corporation.

CBIS also provides systems integration and professional services to major telephone companies worldwide.

- During 1993, CBIS signed a systems integration contract with the Dutch national telephone company, a \$12.8 million contract for a customer service system with Telecom Australia, and a \$20 million contract for a provisioning system and ancillary services for Telecom Australia.

- In 1992, CBIS signed a contract with Swiss PTT Telecom for more than \$40 million over five years to enhance the Swiss national telephone network administration.
- CBIS has completed its customized version of a fully integrated telephone office support for Nippon Telegraph and Telephone (NTT). CBIS will continue to support pilot operations of the system and provide consulting services on nationwide deployment of the system in Japan.

Network operating software provided by CBIS includes the following:

- The Message Processing System (MPS) is an IBM mainframe-based system that integrates all phases of call-message processing--from raw switch data through bill calculation--into one processing system. MPS is available as software or via processing services. In almost all cases, software must be customized to customer requirements. Other IBM mainframe products are available for customer billing and recordkeeping (CRIS and COCRIS).
- OS/Plant is a mainframe facilities management and assignment system that automates the daily administration of cable and terminal network facilities.
- OS/CableNet is an outside plant facilities management system for IBM AS/400 and System/36 computers.
- FAS (Force Access System) is a UNIX-based system that computerizes most of the routine transactions between central data systems administrators and field technicians.
- TestLink is a circuit installation testing system.
- TecNetSM is a family of UNIX-based software products for network circuit provisioning and management that provides order processing, circuit design, work assignment, inventory management, and trouble tracking. Cable & Wireless Communications has signed a contract, worth about \$1 million, for two modules of TecNet, maintenance through 1994, and software enhancements.

CBIS also provides the CMS^R Communications Management System software products and processing services to support user-controlled networks. The target market is private network owners, government agencies, financial services institutions, and universities. The software is available for IBM and compatible mainframes under OS/MVS and CICS.

- CMS modules include:
 - Master Module
 - Call Accounting
 - Equipment/Circuit Inventory
 - Work/Service Order
 - Trouble/Reporting
 - Call Record Inquiry
 - Cable Records Management
 - Directory
 - Message Center
 - Multi-Tenant/Student Billing
- Selected CMS license customers include Air Products and Chemicals, American Management Systems, Banc One, BP Exploration, Crestar Bank, Datacor, Federal Home Loan Mortgage, Kroger Company, Loyola University, Southern Illinois University, State of Alaska, State of New Mexico, and University of Oklahoma.

Systems Integration Group--Government:

CBIS provides services and resources for analysis, planning, procurement support, consulting, and education and training to support a governmental agency's requirements. CBIS services focus on image processing, network integration, professional services, and systems operations (facilities management).

- CBIS has contracts with 11 Cabinet-level U.S. government agencies, including the Department of the Treasury and its bureaus, the USDA's Farmer Home Administration, the Department of Defense, the Army, and the Navy.
- CBIS provides a range of professional services to all bureaus of the Treasury, including applications and systems software, office automation, project management, database management systems, feasibility studies, software/hardware evaluation, data communications, procurement evaluation support, telecommunications, LAN/WAN design and implementation, risk analysis, and technology assessment.
- Network development and integration support services include requirements analysis and design; specification development; hardware/software evaluation, selection installation, and testing; technical/user documentation; system configuration management, control, and accountability; ADP security and risk assessment; and life cycle management.

- Systems design and engineering services provided by CBIS cover the entire systems development life cycle and include cost/benefit analysis, requirement studies, system designs, database designs, programming, testing, documentation, installation, training, and maintenance.

CBIS currently provides systems operations/facilities management services in support of over 20 U.S. government computer centers.

- Operational and technical services provided by CBIS include user support, telecommunications support, LAN management, database maintenance and administration, hardware maintenance and management, disaster recovery, and performance management.
- FM clients include the USDA's Commodity Credit Corporation, and the Departments of Commerce, Defense, Education, Energy, and Justice.

Contract examples include the following:

- In early 1993, CBIS was awarded a five-year, \$41 million contract to manage the U.S. Department of Transportation's computer center, which provides processing support to the Office of the Secretary, the Federal Highway Administration, the Coast Guard, the Federal Transit Authority, the Research and Special Programs Administration, the FAA, and the Federal Maritime Administration. The center runs Amdahl mainframes and Computer Consoles minicomputers.
- Other contract awards during the first quarter of fiscal 1993 included a \$29.3 million contract with the U.S. Navy to provide support to the Navy's Military Personnel Records System; a \$20 million subcontract with the Veterans Benefits Administration to provide turnkey design and installation of local-area networks and workflow management systems in support of the VA's modernization program; and a systems integration subcontract with the U.S. Army Corps of Engineers to provide a total security system.
- CBIS Federal won three contracts worth a combined maximum value of \$45 million, solicited by the government in lots, to provide office automation, decision support, and operations of the Office of the Secretary of Defense. These contracts are built on long-standing CBIS Federal facilities management operations in the Pentagon.
- Under the terms of the contracts, CBIS will provide such services as local-area network design, implementation, and operational support; application requirements analysis; automated data

processing inventory; mini/micro facility management; and application enhancement support.

- Services under these contracts are available to many Defense Department agencies.
- In May 1992, CBIS won a five-year, \$9.2 million contract from the U.S. Army to provide systems management for the Army's Combat Systems Test Activity at Aberdeen Proving Grounds.

CBIS' Government Integration Solutions unit won two contracts with law enforcement agencies worth a combined total of nearly \$2 million.

- The first contract, with the City of Dayton (OH), is valued at nearly \$1 million. CBIS is the prime contractor on a project to automate a recordkeeping system for Dayton and Montgomery counties. The new, NCR UNIX-based system will link courtrooms, the court clerk's office, and the jail to provide recordkeeping and improve tracking of cases and defendants.
- The second contract is with the City of Las Cruces and Dona Ana County (NM) for a computer-aided police dispatch system and a records management system, which will enable the agencies to share case investigation information and descriptive data on criminals and suspects.

CBIS offers full-service image integration and management expertise, including image and information engineering and image conversion to federal and state governments, as well as the financial services industry and communications providers.

- The CBIS EnterpriseSM integrated image and information management solution, introduced in 1992, "image-enables" existing software, hardware, and network resources by adding tools for capturing, manipulating, storing, and retrieving document images. Components include an end-user system, development tools, image and object management core control software, and platform components, including host, UNIX service, LAN/WAN, DOS/Windows, or Macintosh workstations.
- CBIS' Workflow Automation Software manages organizational processing of scanned images and provides computerized models that create project-specific workflows.
- CBIS CD-ROM Authoring and Retrieval Systems enable users to develop CD ROM-based applications containing full-text index documents, graphics, images, and data. The systems can develop

custom or standard applications to provide scanned-image or compound-document retrieval.

- For the Commonwealth of Virginia, CBIS developed OSARS (Optical Storage & Retrieval System), which allows Department of Health employees in the Division of Vital Records access to imaged birth and death records and their attachments.
- Capabilities encompass image systems integration, financial and banking document processing systems, CALS-compliant software, engineering drawing library systems, integrated logistics support, microform products and management, digital conversions, and records storage and retrieval.

Systems Integration Group--Commercial:

CBIS Commercial Systems Integration Group has expanded its former single focus within the financial services industry and now integrates image and information management application solutions that "image-enable" existing software, hardware, and network resources by adding tools for capturing, manipulating, storing, and retrieving document images.

ImageBancSM, introduced in 1988, is an IBM mainframe-based imaged check statement system that enables banks to produce high-speed, high-volume imaging of cancelled checks for printing with customers' regular account statements.

- ImageBanc II, introduced in 1993, is a UNIX-based imaged check statement processing system.
- ImageBanc is currently installed and used in 15 banks and financial service bureaus nationwide. There are six other customers using either the Image Print Facility, Optical Imaging Laser Billing System, or InvestSource products together with customized/systems integration services.
- ImageBanc clients include First Interstate Bank (Seattle, WA), Central Fidelity Bank (Richmond, VA), Frost Bank (San Antonio, TX), CIBC (Toronto, Ontario), DST Systems (Kansas City, MO), Baybanks (Boston, MA), Comerica Bank (Detroit, MI), FNB Chicago (Chicago, IL), Unidata (Johannesburg, South Africa), United Carolina Bank (Charlotte, NC), MSi (Boston, MA), Central Bank of the South (Birmingham, AL), ABN/AMRO (Chicago, IL), First Citizens (Raleigh, NC), Flserv (Milwaukee, WI), and Wausau Financial Systems (Wausau, WI).

- CBIS has joint marketing agreements for ImageBanc with various hardware, software, and services vendors, including Intelligent Visual Systems, BancTec Systems, Unisys, Systematics, Nationar, Newtrend, and NCR.
- In the future, the product can be adapted to other document processing environments, such as credit card processing, mortgage loan document management, trust document management, lockbox services, and cash management.

DocuBancSM is an IBM host-based document composition and formatting tool that enables financial services institutions to produce customized documents for marketing to their customers.

The Flexible Document Presentation System (FDPS) is a document formatting tool for IBM and compatible mainframes used to individualize customer documents.

CBIS also provides consulting, planning, implementation, and operational management services in support of imaging applications.

- CBIS' Image Acquisition and Print Facility (IAPF) product drives high-volume image processing and printing for insurance policy production. IAPF clients include American Family Life Insurance Company and The Travelers Insurance Company.
- CBIS, with National City Corporation, developed InvestSource, an integrated brokerage system that provides financial institutions with an on-line interface for reviewing customer account information, accessing market data, and processing transactions. InvestSource is also being provided to Barnett Technologies.
- CBIS has implemented an image statement rendition system for Kelly Services, Inc., the nation's largest temporary help firm, that provides image-based invoices for Kelly's 180,000 customers. The implementation represents a major commercial application of CBIS' image capture and processing software outside the financial industry.

The Object Management System provides users of MVS-based systems with an object storage, retrieval, and distribution system. This system integrates the storage of source document images and computer-generated output (text and/or image data) with mainstream processing applications to provide on-line, real-time access to critical business information.

In March 1992, CBIS introduced PRiiSM (Public Records Integrated Information System) a public records storage, organization, and

retrieval system that is available on either a turnkey system or service bureau basis.

- PRiISM was designed by experts in the title plant industry to provide a way public records information can be used to generate fee income for title plants. It can be customized to meet the needs of individual localities and offers options to store tax records data, sales/assessment data and document images.
- PRiISM's open-systems, UNIX-based architecture is portable to a range of hardware platforms.

CBIS' Commercial Systems Integration unit was awarded a \$4.6 million contract to develop a network management system for the State of Florida to automate the state's Network Control Center.

- The new system will support the SUNCOM, a publicly funded network that provides statewide telecommunications to social services agencies and local governments.
- The CBIS system, scheduled for installation in August 1993, will collect detail call records from around the state for billing and analyzing problems. CBIS will provide four years of on-site support with two option years.

Computer Hardware:

CBIS currently has three data centers as follows:

- The Cincinnati (OH) data center supports cellular billing, report generation, and microfiche printing. The center has one IBM 3090-600J, one IBM 3090-300J, and one IBM 3084-Q96 installed.
- The Maitland (FL) data center supports cellular billing and report generation. There is one IBM 9021/720 and one IBM 3090-66S installed.
- The Monterrey (Mexico) data center supports cellular billing for several of Mexico's mobile service providers. This center has an IBM Model 9121/210 installed.

Marketing and Sales

CBIS markets its products and services through a direct sales force and through joint marketing agreements.

Alliances

CBIS has numerous alliances with various vendors, including the following:

- CBIS has a joint marketing and distribution agreement to sell Cellular Technical Service Co.'s family of information systems to the cellular industry.
- CBIS and NCR have joint development and marketing agreements as part of NCR's Top 250 program to provide solutions and services to the largest 250 financial services institutions in the U.S.
- Wausau Financial Systems markets certain CBIS image and document management products with NCR Series 3000 UNIX-based systems and NCR 7780 image capture platforms to small and midrange banks, thrifts, credit unions, and service bureaus.

Clients

Major clients include AT&T, (17% of total revenue in 1992, 12% of revenue in 1991, and 13% of total revenue in 1990), McCaw Cellular Communications (16% of total revenue in 1992, 14% of revenue in 1991, and 13% of total revenue in 1990), and CBT (14% of total revenue in 1992, 17% of revenue in 1991, and 17% of total revenue in 1990).

Competitors

Major competitors include other regional Bell operating companies, American Management Systems, CAP GEMINI, and the Big Six accounting firms.

COMPANY PROFILE

CINCINNATI BELL INFORMATION SYSTEMS INC.

600 Vine Street
P.O. Box 1638
Cincinnati, OH 45201
(513) 784-5900

Richard A. Licursi, President
A Wholly Owned Subsidiary of Cincinnati
Bell Inc.
Total Employees: 3,100
Total Revenue, Fiscal Year End
12/31/88: \$186,600,000

The Company

Cincinnati Bell Information Systems Inc. (CBIS) provides a range of processing services, software products, and professional services to telecommunications companies, large corporations, and government. CBIS also provides its products and services to other operating units of its parent, Cincinnati Bell Inc.

- CBIS was formed in 1962 as the Information Systems department of Cincinnati Bell Telephone.
- In August 1983, CBIS was incorporated as a wholly owned subsidiary of Cincinnati Bell Inc.

Since 1985 CBIS has made several acquisitions which have significantly increased its revenue and expanded its product and service offerings.

- In July 1988, CBIS acquired Vanguard Technologies International, Inc. of Fairfax (VA) for approximately \$71.7 million.
 - Vanguard provides a range of professional services to U.S. government agencies and government prime contractors.
 - Vanguard had approximately 1,500 employees at the time of the acquisition. Revenue and net income for the fiscal year ending January 31, 1988 were \$55.6 million and \$3.0 million, respectively.
 - Vanguard is now a wholly owned subsidiary of CBIS and its operations are included in CBIS' Federal Systems business unit.
- In June 1988, CBIS acquired Computer Communications & Technology, Inc. of Bellevue (WA).

- Computer Communications & Technology is a small, private firm that markets paging management systems. Its operations have been merged into CBIS' Mobile Communications Management Systems business unit.
- In May 1987, CBIS acquired Auxton Computer Enterprises, Incorporated (AUXCO) of Maitland (FL) for \$92 million. The acquisition was accounted for as a purchase.
 - AUXCO provides professional services consulting, processing services, and application software products to telecommunications companies and other large corporations.
 - AUXCO had approximately 300 employees at the time of the acquisition. Its revenue and net income for 1986 were \$30.3 million and \$2.5 million, respectively.
 - AUXCO business contributed \$24 million to CBIS' 1987 revenue (for May through December).
 - The operations of AUXCO have been merged into various CBIS business units.
- In June 1986, CBIS acquired Cellular Business Systems, Inc. of Chicago (IL). Terms of the purchase were not disclosed.
 - Cellular Business Systems provides processing services, software products, and professional services to cellular mobile telephone companies.
 - This unit, which contributed approximately \$7.1 million to CBIS' 1986 revenue and \$8.4 million to 1987 revenue, has been merged into CBIS' Mobile Communications Management Systems business unit.
- In late 1985, CBIS acquired COMMTRACK, a provider of call accounting services. Its operations have been merged into CBIS' Network Technologies business unit.
- In September 1985, CBIS acquired Creative Management Systems, Inc. of McLean (VA). Creative Management Systems provides call accounting software products and processing services for the management of private telecommunications networks.

CBIS' 1988 total revenue reached \$186.6 million, of which approximately \$141.6 million (76%) was derived from noncaptive sources and \$45 million (24%) from other Cincinnati Bell

operating units. Operating income rose 92%, from \$11.3 million in 1987, to \$21.7 million in 1988. A five-year revenue summary follows:

**CINCINNATI BELL INFORMATION SYSTEMS
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1988	1987	1986	1985	1984
Total revenue	\$186.6	\$110.8	\$56.0	\$42.0	\$30.0
• Percent increase from previous year	68%	98%	34%	37%	N/A

Increases in revenue during 1988 have been attributed to approximately \$25.9 million in revenue from Vanguard from its date of acquisition in July 1988, increases of \$23.9 million from the effect of a full year versus eight months from the AUXCO acquisition in May 1987, and increases of \$23 million as a result of significant growth in new business.

Of Cbis total 1987 revenue of \$110.8 million, approximately \$67.9 million was derived from noncaptive sources. 1987 results include more than \$24 million in revenue from AUXCO, and \$8.4 million from Cellular Business Systems. The remainder of revenue growth was due principally to increased business.

CBIS is currently organized into six strategic business units as follows:

- Telecommunications Information Systems, headquartered in Cincinnati, supports the operations and administration of Bell operating (including Cincinnati Bell) and independent telephone companies; international telecommunications companies; post, telephone & telegraph (PTT) organizations, and interexchange carriers and resellers through its software products, processing services, and professional services.
- Network Technologies, headquartered in Cincinnati, provides software products and processing services to support user-controlled networks. The target market is private network owners, government agencies, universities, and communication equipment manufacturers and users.

- Mobile Communications Management Systems, headquartered in Cincinnati, provides processing services and application software products for customer-account management and customer billing to cellular telephone companies and radio paging providers.
- Composed Applications, headquartered in Maitland (FL), provides electronic publishing systems integration and consulting services to publishing OEMs; MIS departments; and end users of automated documents.
- Strategic Management Services, headquartered in Cincinnati, provides various professional services, including communications consulting, custom software development, and training and education to telecommunications companies, businesses, and government.
- Federal Systems (Vanguard), headquartered in Fairfax (VA), provides a range of professional services to U.S. government agencies and government prime contractors.
- CBIS International markets CBIS software products in Europe, the Pacific Basin, and the Caribbean.

Major competitors include other regional Bell operating companies, Cap Gemini, and Big 8 accounting firms.

Key Products and Services

INPUT estimates that approximately 60% (\$85 million) of CBIS' 1988 noncaptive revenue was derived from professional services, 25% (\$35 million) from application software products, and 15% (\$20 million) from processing services.

Telecommunications Information Systems supports the operations and administration of Bell operating (including Cincinnati Bell) and independent telephone companies; international telecommunications companies; post, telephone & telegraph (PTT) organizations, and interexchange carriers and resellers through its software products, processing services, and professional services.

- Professional services contract examples include the following:
 - In October 1988, CBIS announced a two and one-half year, \$88 million contract (through Eckert Research International) with Nippon Telephone and Telegraph (NTT) to build nine systems in 1989 and 1990 to automate NTT's telephone business office operations throughout Japan. The

systems will be built in five phases: requirements, design, development, integration testing, and acceptance. At its peak, the project will involve 250 CBIS programmers, analysts, and support personnel. When completed, the systems will provide an integrated customer records and operations support network of systems for NTT's more than 50 million customers.

- In March 1988, Westinghouse Electric signed a contract with CBIS for the development of an emergency response system enhancement using CBIS' Voice Notification System for Westinghouse's Western Zirconium Division (Ogden, UT).
- The following IBM mainframe products are available as software or via processing services. In almost all cases, software must be customized to customer requirements. Pricing for software and customization, as well as processing, is handled on a contract basis.
- The Message Processing System (MPS) integrated all phases of call-message processing--from raw switch data through bill calculation--into one processing system.
 - In August 1988, CBIS announced the sale of a \$2.2 million telephone message processing software package to Alberta Government Telephones (AGT). When installed, the system will automatically consolidate telephone toll message and usage billing throughout AGT's service area. The system will require 46 weeks to install and test.
- The Customer Records Information System (CRIS) is a customer billing and recordkeeping system.
- The Centralized On-Line Customer Records Information System (COCRIS) is an on-line system for customer and service representatives that communicates with CRIS and MPS to extract and update customer billing information daily.
- OS/Order™ manages the processing of service orders from the initial customer contact through order completion.
- OS/Plant™ automates the daily administration of cable and terminal network facilities, providing control over the outside plant network.

- During 1987 Philippine Long Distance Telephone Company purchased a \$1.6 million OS/PLANT system for telecommunications network facilities management.
- OS/CableNet is a facilities management system that inquires on and updates current data on-line, assigns circuits, and prepares reports.
- OS/Force Plus™ automates the managerial and clerical procedures of tracking and controlling outside-plant construction activities.
- OS/Connector™ links the mainframe with any UNIX-based minicomputer.
- SOCRATES™ (Service Order Customer Record and Terminal Entry System) provides service-order processing, bill preparation and processing, toll processing, and payments processing for telephone companies.
- LUCAS™ (Line Utilization Cable Assignment System) creates and maintains a computer-based inventory record of cable pairs, terminals, and line equipment to manage and control service-order repair and cable assignment activities for telephone companies.
- AFACS is an automated facilities assignment system.
- Other clients in this business unit include AT&T, British Telecom, Contel, Telecom Australia, and Standard Telephone.

Network Technologies provides software products and processing services to support user-controlled networks. The target market is private network owners, government agencies, universities, and communication equipment manufacturers and users.

- The following telephone call accounting/traffic analysis systems are available to clients as a software product or as a processing service:
 - CMS-2000™ is a cost-allocation system used for single-site PBX or multisite ETN (electronic Tandem network) telephone systems.
 - CMS-3000™ integrates call reporting, budgeting, inventory, traffic reporting, and information management capabilities.

- CMS-5000™ is a billing system designed for multitenant and resale carrier applications.
- CMS-9000™ is a traffic analysis system.
- Other software products available include the following:
 - ICE-9 is a private telecommunications network administration system for Fortune 1000 companies, colleges and universities, and government. It provides modules for service-order processing, billing, trouble-ticket processing, directory assistance and publishing, equipment inventory, employee administration, and cable/frame/switch administration.
 - A partial list of clients in this area includes AT&T, Coca-Cola, IBM, the Massachusetts Institute of Technology, the State of Missouri, Nabisco Brands, the State of New Mexico, and Princeton University.

The Mobile Communications Management Systems unit provides processing services and application software products for customer-account management and customer billing to cellular telephone companies and radio paging providers.

- The following systems are available as software products or processing services:
 - Cellware™ is a message processing and billing system based on IBM mainframes.
 - CompuCellular provides service-order processing, bill preparation and processing, and payment processing for the cellular mobile telephone industry.
 - CompuNetwork provides the same services as CompuCellular for the toll-telephone reseller and paging service industries.
 - Switch Manager™ automates switch-number inventory, reseller and agent activations, and cellular roamer information.
 - Dealer Commission Report System (DCRS) automates many tasks involved with calculating and recalculating dealer commission plans.

- ASAP collects call detail records, reformats data, and sends it directly to cellular telephone billing systems.
- The COMPTECH Management System performs accounting functions for paging providers, including customer accounts billing.

Composed Applications provides electronic publishing systems integration and consulting services to publishing OEMs, MIS departments, and end users of automated documents.

- As a result of research and development in cooperation with Xerox, CBIS entered the field of electronic publishing and high speed document composition.

Strategic Management Services provides a range of professional services which incorporate added-value through application of current and emerging information management technologies, including UNIX open systems, fault-tolerant processing, relational data base management systems, electronic data interchange, distributed processing systems, and local-area networking.

- Services provided include management and project management consulting, project management, software development, education and training, and systems integration.
- The CBIS Institute maintains training sites in the Cincinnati, New York, and Orlando areas, and provides public seminars, custom course development, and on-site technical training for corporate users. Various topics are covered, including UNIX and relational data bases.
- Clients in this area include AT&T, Fiatallis, Hyatt Hotels, McDonalds, TRW Enterprises, and U.S. Sprint.

Federal Systems (Vanguard) provides a range of professional services to U.S. government agencies and government prime contractors. Services include the development, installation, and maintenance of custom application software; facilities management; systems integration; integrated logistics support; and document storage and retrieval "information services."

- Custom application software development services include systems requirements definition, systems analysis and design, programming, testing, documenting, and training. The custom applications systems that the company develops are owned by the customer.

- Custom software applications provided by the company have included systems for financial management, administration, supply, personnel, logistics, test-range safety, computer-aided design/manufacturing (CAD/CAM), security, and weapons system modernization.
- Vanguard continues to provide a range of development services under a five-year task order contract with the Internal Revenue Service (IRS).
- Under contract to the National Capital Region of the General Services Administration (GSA), Vanguard performs a range of data base development tasks.
- In August 1987, Vanguard was awarded a three-year task order-type contract from the Department of Housing and Urban Development (HUD) to expand the use of Vanguard's services to include providing systems analysis and programming support. Vanguard has provided facilities management services to HUD since 1983.
- Facilities management professional services are provided to various government agencies.
 - Vanguard has provided facilities management services to the U.S. Department of Agriculture's (USDA) Fort Collins Computer Center since December 1986. The Center is a large-scale, multisystem facility that services the needs of the USDA and a number of sister agencies.
 - Vanguard has provided on-site support to the U.S. Department of Labor (DOL) in computer operations, data preparation, and data entry.
 - Other FM clients include the U.S. Geological Survey, HUD, the Department of Interior, the Office of the Secretary of Defense, and the U.S. Department of Agriculture.
- In addition to supporting equipment maintenance requirements in the course of broad-based FM and Information Services contracts, Vanguard offers its Equipment Maintenance Division services to clients directly as a separate area of contract activity.
- "Information services" provided by this unit include the design, development, and operation of large manual systems for the collection, storage, and retrieval of paper documents and data for government information centers, data archives, libraries, record centers, and subscription centers.

- In November 1987, Vanguard was awarded a \$26.7 million contract by the Department of Defense to operate and maintain the U.S. Navy's Military Personnel Records System, which is one of the world's largest updatable microfiche files.
- Vanguard provides information services to the U.S. Air Force's Engineering Data Computer Assisted Retrieval System (EDCARS) under a task administered by the General Services Administration.
- At the Department of Commerce's Patent and Trademark Office, Vanguard's document specialists respond to approximately 10,000 requests for patent and trademark technical documentation each day. Vanguard also manages the patent and trademark archives.
- For the U.S. Department of Agriculture (USDA), Vanguard provides information services support of the USDA National Agricultural Library (NAL).
- With the acquisition of Diversified Data Corporation (DDC) in April 1987, Vanguard now provides planning, analysis, design, and development services in the area of integrated logistics support to the Department of Defense and defense contractors. Clients include the U.S. Army's Belvoir Research, Development, and Engineering Center (for PATRIOT missile ground support equipment) and the Army's Armament, Munitions, and Chemical Command.
- The company is also a subcontractor to government prime contractors, such as Rockwell International, Computer Sciences Corporation, and Planning Research Corporation.

Industry Markets

INPUT estimates approximately 60% of CBIS' 1988 revenue was derived from the telecommunications industry and 25% was derived from the federal government and prime contractors. The remaining 15% was derived from large corporations and educational institutions.

CBIS' largest client in 1988 was Cincinnati Bell Telephone, which contributed approximately 23% to total revenue. Other major clients include AT&T (contributing 11% to 1988 revenue), Alberta Government Telephones, Ameritech, Arthur Andersen, Bell Atlantic, Bell Communications Research, BellSouth, British Telecom, Contel, Chase Manhattan Bank, Coca Cola, Exxon, GE, GTE, IBM, Intel, Jamaica Telephone, Kroger, LIN Broadcasting, Martin Marietta, McCaw Communications, New York Times,

Nippon Telegraph and Telephone, NYNEX, Pacific Telesis, Phillippine Long Distance Telephone, Princeton University, Puerto Rico Communications Authority, Rockwell International, Siemens, Sohio, Southwestern Bell, Telecom Australia, the U.S. government, U.S. West, Westinghouse, and Xerox.

Geographic Markets

Approximately 80% of CBIS' noncaptive information services revenue was derived from the U.S. and 20% from international sources.

CBIS has offices in Cincinnati, Chicago, Kansas City, Los Angeles, New York, Orlando, Seattle, Washington, D.C., London, and Manila.

Computer Hardware

CBIS maintains two data centers as follows:

- The Cincinnati data center supports 6,000 terminals and has the following equipment installed:
 - 1 IBM 3090/600E
 - 1 IBM 3090/300E
 - 1 IBM 3081K
- The Maitland data center has an IBM 3084Q and an IBM 3090/150E connected to 50 IBM 3380 direct-access storage devices and 22 IBM 34XX tape devices that support more than 4,000 on-line terminals.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1996

Cincom Systems, Inc.

President & CEO: Thomas M. Nies
2300 Montana Ave.
Cincinnati, OH 45211
Phone: (513) 662-2300
Fax: (513) 481-8332
Internet: <http://www.cincom.com>

Status:	Private
Employees:	980
Revenue:	\$155,000,000
Fiscal Year End:	(9/30/95)

Key Points

- Cincom Systems, Inc. is a privately held software company offering manufacturing and financial applications as well as complete solutions for object-oriented and fourth-generation language application development, client/server and object-relational databases, work-flow automation, and document management.
- In March 1996, Cincom and IBM announced a strategic global partnership consisting of technology, service, and marketing

initiatives to deliver manufacturing solutions to joint customers.

- In January 1996, Cincom introduced the CONTROL:Acquire™ suite of software products, the most recent addition to the company's enterprise management product line.

In December 1995, Cincom released TOTAL FrameWork™, the industry's first object-oriented application assembling environment.

Company Description

Cincom Systems, Inc., founded in 1968, was incorporated in Ohio as a firm specializing in database software. Cincom entered the database management system market in 1969

with the delivery of the high-performance, large-volume DBMS, TOTAL™.

Cincom software products run under a variety of operating systems, including UNIX, NT, and all the major host-based proprietary and non proprietary operating systems and support platforms from Hewlett-Packard, Sun Microsystems, IBM, Digital Equipment, Data General, Sequent, Fujitsu, Groupe Bull, and Siemens-Nixdorf.

Organization and Structure

Cincom is organized into integrated product-specific divisions. Each division is responsible for the development, support, marketing, and sale of its specific product line.

- Divisions include: the Advanced Technology Group, Business Control Systems, and the Document Solutions Group.
- Complementing these product-specific divisions are Cincom's Greater Asia/Pacific operation, Latin-American Licensee, and Legal and Administrative Services divisions, and Finance.

Cincom is headquartered in Cincinnati (OH) with U.S. regional offices located in Atlanta (GA), Boston (MA), Chicago (IL), Dallas (TX), Irvine and San Francisco (CA), Minneapolis (MN), Philadelphia (PA), Pittsburgh (PA), St. Louis (MO), and Washington D.C.

Regional international headquarters are located in London (England), Copenhagen (Denmark), Paris (France), Frankfurt (Germany), Tokyo (Japan), Sydney (Australia), Singapore, Hong Kong, Sao Paulo (Brazil), Monaco, and Toronto (Canada).

- Other international offices are located in Montreal, Ottawa, and Vancouver (Canada);

Maidenhead and Manchester (England); Edinburgh (Scotland); Geneva and Zurich (Switzerland); Brussels (Belgium); Nieuwegein (the Netherlands); Eschborn (Germany); Gothenburg (Sweden); Oslo (Norway); Osaka (Japan); Melbourne (Australia); Wellington (New Zealand); Rio de Janeiro (Brazil); Madrid and Barcelona (Spain); and Mexico City (Mexico).

- Independent agents market Cincom's products in Argentina, Chile, Colombia, Equador, Finland, Greece, Guatemala, Indonesia, Israel, Italy, Korea, Malaysia, Panama, Peru, the Philippines, Portugal, Saudi Arabia, South Africa, Spain, Taiwan, Thailand, Turkey, Uruguay, Venezuela, and Yugoslavia.

Company Strategy

The foundation of Cincom's strategy is its customer focus. The company is committed to providing strategic and tactical support for its clients' information systems. Cincom provides innovative new technologies through internal development as well as through global strategic alliances with other leading providers of complementary technologies and services.

Cincom is committed to helping its clients successfully implement and integrate technologies by providing comprehensive and ongoing services from the outset of any initiative. The company's objective is to streamline its clients' implementation and expedite their return on investment. The company is committed to lowering clients' risk, reducing their costs, and saving time.

Financials

Cincom's fiscal 1995 revenue reached \$155.0 million, a 3% increase over revenue of \$150.0 million for fiscal 1994.

Fiscal 1995 revenue growth was attributed to the introduction of new product technology.

Research and development expenditures were approximately 12% of revenue in both fiscal years 1995 and 1994.

Cincom Systems, Inc.
Five-Year Financial Summary
 (\$ Millions, except per-share data)

Item	Fiscal Year				
	9/96	9/95	9/94	9/93	9/92
Revenue	\$168.0 (a)	\$155.0	\$150.0	\$156.0	\$158.0
• Percent change from previous year	8%	3%	(4%)	(1%)	2%

(a) Projected fiscal 1996 revenue.

Revenue Analysis by Product/Service

One hundred percent of Cincom's fiscal 1995 revenue was derived from software products and associated support services. Source of revenue, by product line, is estimated as follows:

Database.....	40%
Application development.....	23%
Manufacturing.....	29%
Other.....	8%
	100%

Market Financials

Cincom markets its products to Fortune 1000 companies across industries, and to federal, state, and local government.

Geographic Markets

Approximately 38% of Cincom's fiscal 1995 revenue was derived from the U.S. and 62% from international sources.

A further breakdown of fiscal 1995 revenue follows:

North America.....	42%
Europe	41%
Asia/Pacific.....	13%
South America.....	2%
Other	2%
	100%

The company currently has more than 60 offices in 20 countries, and more than 20 distributors located internationally.

Employees

In fiscal 1995, Cincom had a total of 980 employees, 494 in the U.S. and 486 internationally.

Key Products and Services

Software Applications

CONTROL™—A portfolio of business applications that supports the complete business cycle of companies manufacturing and repairing highly engineered products.

- CONTROL is based on an open client/server architecture, combining a graphical user interface and multiple database support.

- CONTROL is available on leading UNIX platforms, including Hewlett-Packard, Digital Equipment, and IBM RISC System/6000 and System/390 Parallel Servers.
- CONTROL is an enterprise management software suite organized around business planning, prospecting, proposing, order management procurement, manufacturing, delivery, and service and support processes.
 - CONTROL:Acquire™, Cincom's latest suite of enterprise management software products, is a suite of software products that supports bidding activities.

TOTAL FrameWork™—An application development tool introduced in December 1995, that combines an object-relational database, object-oriented applications assembly tools, and workflow automation.

- All components are designed on an open and extendible architecture, allowing the integration of existing applications and tools into TOTAL FrameWork.
- All components are integrated through Microsoft's OLE/COM, allowing any OLE-compliant tools to use and be integrated into TOTAL FrameWork.
- TOTAL FrameWork combines workflow automation with component-based application assembly and data integration.
 - WorkFlow FrameWork™
 - Assembly FrameWork™
 - Persistence FrameWork™

AuroraDS™—Client/server document system allowing production automation for the insurance, financial, and utilities industries, as well as government agencies.

- AuroraDS allow users to create, produce, assemble, and print documents at the client location or remotely, on their own local network or through a host mainframe or UNIX system.
- AuroraDS, marketed internationally, is installed in over 800 organizations worldwide.
- AuroraDS also provides access to data and documents, archiving, production, and printing on existing host systems.
 - AuroraDS Host/UNIX
 - (MANAGE/Series™)
 - Text (M/Text™)
 - Spell (M/Spell™)
 - Graph (M/Graph™)
 - Archive (M/Archive™)
 - PrintManager (M/PrintManager™)
 - Host Adaptor (not UNIX)
 - AuroraDS Workstation
 - Designer
 - Customizer
 - Power Writer
 - Document Assembly Server
 - Workstation Adaptor

Other Technologies

Database Management Systems—Cincom's SUPRA® Server is an SQL-based, relational client/server database that runs across all platforms, from the largest MVS/ESA mainframe to VSA, Digital, Hewlett-Packard, UNIX, and the PC.

Application Development—Cincom's Application Generation System, AD/Advantage® is an integrated, interactive environment that automates development

activities throughout the application development life cycle.

Clients

A sample list of Cincom clients is shown in the exhibit on the following page.

Marketing and Sales

Cincom markets its products in the U.S. through a direct sales force.

Independent agents market Cincom's products in Argentina, Chile, Colombia, Ecuador, Finland, Greece, Guatemala, Indonesia, Israel, Italy, Korea, Malaysia, Mexico, Panama, Peru, the Philippines, Portugal, Saudi Arabia, South Africa, Spain, Taiwan, Thailand, Turkey, Uruguay, Venezuela, and Yugoslavia.

Alliances

In March 1996, Cincom and IBM announced a strategic global partnership to deliver manufacturing solutions to joint customers worldwide.

- This partnership is comprised of technology, service, and marketing initiatives targeted to IBM customers implementing Cincom's Enterprise Resource Planning (ERP) software, CONTROL™.

Cincom's recent partnership agreements with organizations around the world include:

Belgium—CIMAD and CAP VOLMAC

France—Arche 2 and Klee

Germany—Better Office, C.O.M., Jung Electronic, and Object Leaders

Northern Europe—Enator

Canada—Mark Winter Associates

U.K.—Salamander

U.S.—Action Technologies, Semaphore, Syrinx, and VMARK

India—Advanced Synergic Microsystems and HCL-Hewlett-Packard

Thailand—Copyright Corporation

Malaysia—Uniphoenix Technology and Guthrie Solutions

INPUT Assessment

Cincom considers its strengths to include:

- Twenty-eight years of software experience
- Worldwide presence and support
- Technologically advanced solutions

Challenges facing the company over the coming year include:

- Expanding distribution channels
- Managing growth in new markets

Exhibit
Cincom Systems, Inc.
Client List

3M	Dowty Aerospace	Neles-Jamesbury
Aerofjet Electro Systems	DuPont	Nestle K.K.
Aerospatiale	Ericsson	Northwestern Mutual Life Insurance
Aetna Life Insurance Company	Ethicon	Norwich Union Life Insurance
Airbus Service Company, Inc.	Fairchild Fasteners	Oerlikon Aerospace, Inc.
Alcatel	Ferrero	Ohio Edison
Alcoa Composites, Inc.	Fiat	Ohio University
Allstate Insurance	Fleetguard, Inc.	ORGANON
Altos Hornos de Mexico S.A.	Fleischmann	OTIS
American Express Travel-Related Services	General American Life Insurance	Parke-Davis
American General	General Dynamics	Philips Electronics
American Health & Life Insurance	General Electric Corporation	Prudential Insurance Property and Casualty
American Heritage Life Insurance	Goodyear	PSA - Peugeot
American Standard	Grumman Data Systems	Public Employees Retirement System
Amex Life Insurance Company	H.J. Heinz Company Ltd.	Reader's Digest
Amherst College	Hallmark	Renault
Anheuser-Busch	Helsinki University Central Hospital	Rockwell International
Atlanta Gas Light Company	Hershey Foods Corporation	Rolls-Royce
Australian Submarine Corporation	Hill-Rom Company, Inc.	Rosyth Royal Dockyard
Banc One	Hitachi Semiconductor	Sanyo Electric
Barclays Bank	Honda	Security First Group
Benetton	Honeywell	Sharp Electronics
BF Goodrich	ICI Plc	Siemens-Plessey
BMW/Rolls-Royce	Ingersoll-Rand	Social Security Administration
Boeing	Johnson & Johnson	Standard Elektrik Lorenz
British Petroleum	Kraft General Foods	Tel Aviv University
British Steel Plc	Lucas Aerospace Magnavox	Trane Company
BT Industries	Martin-Baker	United Distillers
Canadian Department of National Defense	Massey-Ferguson	USG Annuity & Life
Carleton Technologies, Inc.	MasterCard International	U.S. Department of Labor
Carolina Power and Light	May Clinic	Vickers
Caterpillar Champion International	McDonnell Douglas	Wagstaff Engineering
Ciba Geigy	Mead Corporation	Warner Robbins Air Force Base
Citicorp	Mercedes Benz	Westinghouse
Coca-Cola	Messier-Bugati	Wells Manufacturing
Columbus Life Insurance Company	Michelin	World Financial Network National Bank
Consumers Life Insurance Company	Mitsubishi	Xerox
Crawford Fitting Company	Moet & Chandon	Yamaha
Department of Navy—FMSO	Monsanto	Zeneca Pharmaceuticals
	Nabisco	Zenith Insurance
	National Science Foundation	

CINCOM SYSTEMS, INC.

2300 Montana Avenue
Cincinnati, OH 45211-3899
Phone: (513) 662-2300
(800) 543-3010
Fax: (513) 481-8332

President & CEO:	Thomas M. Nies
Status:	Private Corporation
Total Employees:	1,405
Total Revenue:	\$158,030,000
Fiscal Year End:	9/30/92

Key Points

- Cincom Systems is a privately-held software company whose corporate mission is to provide open, high-performance information systems that meet businesses' needs across a range of computing platforms, from the desktop to the data center.
- Cincom began its 25th calendar year on January 1, 1993, with an industry-record of 24 consecutive years of revenue growth from ongoing operations.
- Among the company's strengths are its international presence--with over 60 offices worldwide and clients in 72 countries--and technologies that support the move away from proprietary mainframe environments to open systems computing and enterprisewide solutions.
- Over the past three years, Cincom has invested an average of 16% of its revenues each year into developing and enhancing new technologies.
- Cincom has been recently awarded a 5-year contract valued at over \$10 million from the Defense Information Systems Agency (DISA) and the Defense Commercial Communications Office (DECCO). These agencies have made Cincom's SUPRA Server open data base management system and related software tools the preferred products for DISA.
- Major recent announcements include SUPRA Server, an open data base management system for UNIX and PC LAN operating environments, the availability of CONTROL:Manufacturing for UNIX platforms, and AD/Advantage, a full life-cycle application development system for a range of platforms, including UNIX, IBM, DEC, Hewlett-Packard, and Bull.

Company Description

Cincom Systems develops, markets and supports systems and applications software products in five major areas: client/server and distributed data base management; manufacturing and financial applications; application development tools; process, resource, and project management; and text management.

Cincom software products run under a variety of operating systems, including UNIX, OS/2, MS-DOS, and all the major host-based proprietary and non-proprietary operating systems and support platforms from Hewlett-Packard, Sun Microsystems, IBM, DEC, Data General, Sequent, NCR, Fujitsu, Bull, and Siemens-Nixdorf.

Cincom is organized into integrated product-specific divisions. Each division is responsible for the development, support, marketing, and sale of its specific product line.

- Divisions include: Applications Development Technologies, Manufacturing Solutions, Data Base, Text Management, and Project Management.
- Complementing these product-specific divisions are Cincom's International Sales, Latin-American Licensee, and Legal and Administrative Services divisions, and Finance.

Company History

Cincom was incorporated in Ohio as a firm specializing in data base software. The company entered the data base management system market in 1969 with the delivery of the high-performance, large-volume DBMS called TOTAL.

Cincom was the first systems software company to organize a national users conference in 1970 and in 1971 became the first American software firm to establish an international office.

The company has since added an advanced SQL-based relational DBMS (SUPRA), application development tools (MANTIS and AD/Advantage), manufacturing and financial applications (CONTROL:Manufacturing and CONTROL:Financial), process and project management systems (CPCS), and text management systems (MANAGE:SERIES) to its product line.

In March 1990, Cincom sold its Net/Master network management product to Systems Center, Inc. in order to concentrate its resources on its remaining product lines. This sale generated nearly \$50 million in cash for the company.

Financials

Cincom's fiscal 1992 revenue reached \$158 million, a 2% increase over fiscal 1991 revenue of \$155 million. In the four-year summary that follows, financials have been restated to reflect continuing operations:

**CINCOM SYSTEMS, INC.
FOUR-YEAR REVENUE SUMMARY***
(\$ millions)

ITEM	FISCAL YEAR			
	9/92	9/91	9/90	9/89
Revenue (a)	\$158.0	\$155.0	\$150.0	\$143.0
Percent increase from previous year	2%	3%	5%	N/A

(a) Restated to exclude revenues from the Net/Master network management product line, which was sold in March 1990.

Cincom management expects fiscal 1993 revenue will reach \$170 million, an 8% increase over fiscal 1992.

Because Cincom is private, actual profit figures are not available. The company is profitable and has shown profit increases for each of the reporting periods shown above.

Research and development expenditures were approximately 16% of revenue in fiscal 1992, compared to 17% of revenue in fiscal 1991, and 14% of revenue in fiscal 1990.

- Cincom has invested heavily to develop new technologies such as client/server and distributed data base systems, full life-cycle application development, and multisite, multinational manufacturing techniques.
- The company maintains seven dedicated R&D facilities around the world to monitor and respond to market shifts.

Alliances

During fiscal 1992, Cincom formed a number of partnerships with vendors that are integrating their applications software with various Cincom products, including Independent Computer Consulting Services, Inc. (Columbus, OH), Logical Technologies, Inc. (Peoria, IL), Reamdata Inc. (Lebanon, PA), Software Alternatives, Inc. (Toledo, OH), Tidewater Consultants, Inc. (VA), TechGnosis Inc. (Boca Raton, FL), IQ Software Corporation (Atlanta, GA), Mega International (France), and Intelligent Environments.

Cincom also has existing similar partnerships with over 40 software vendors, including major companies like Gupta, Microsoft, ATTAR, and Data Dictionary Pty. Ltd.

Cincom has other joint marketing and technical agreements with various hardware vendors including Hewlett-Packard, Bull, DEC (Cooperative Marketing Program), Fujitsu, and Sequent.

Employees

As of September 30, 1992, Cincom had 1,405 employees (generating \$112,455 in revenue per employee).

Competitors

As Cincom Systems shifts from dependence on the IBM and DEC proprietary markets, its competitors are also shifting.

Currently, major competitors in the data base area include Oracle, Informix, Sybase, Ingres, and Progress Software.

Competitors in the manufacturing products area include ASK, SAP, and Oracle.

Key Products and Services

One hundred percent of Cincom's fiscal 1992 revenue was derived from software products and associated support services. Source of revenue by product line is estimated as follows:

Data base	36%
Application development	34%
Manufacturing	27%
Other	<u>3%</u>
	100%

Cincom currently has over 8,000 product sites in 72 countries worldwide.

Relational Data Base Management:

SUPRA Server (Cincom's current version of SUPRA) is an advanced open data base management system that offers portability across multiple hardware and operating system platforms including IBM, DEC, and UNIX.

- SUPRA Server, introduced in November 1992, extends to the UNIX and PC LAN operating environments the OLTP-level performance and mission-critical capabilities traditionally available only on large computers running proprietary operating systems. It is intended to

serve as a foundation for the new class of open-system applications, including client/server, distributed, object-oriented, and multimedia systems.

- Based on the ANSI/SPARC Three Schema Architecture, SUPRA Server adheres to industry standards such as ANSI/ISO SQL and IBM's SAA and is compatible with IBM's DB2.
- SUPRA Server is available for processors running under MVS, MVS/XA, MVS/ESA, VM/CMS, VSE, VSE/ESA, CICS, VMS, UNIX (including RS/6000, Sun, Sequent, ULTRIX and others), OS/2 and MS-DOS, local-area networks, and mainframe client/server facilities. It supports the leading communications protocols--DECNet, LAN Manager, LAN Server, LU6.2, Novell, TCP/IP, Banyan Vines, and Net BIOS.
- SUPRA Server is one of the first open data base management systems that has been ported to the following Windows environments: Intel, MIPS, and DEC Alpha/AXP.
- SUPRA 3.0, scheduled for availability in Fall 1993, is a new version of SUPRA that has the power, dependability, security, and crash-proof recovery capabilities of IBM's mainframe-based DB2 as well as the ease of use of desktop-based PC LAN DBMSs.

Application Development:

AD/Advantage[®], introduced in 1991, is a full life-cycle application development system that automates activities in each phase of the traditional application life cycle--analysis, design, build, test, implementation, and maintenance.

- AD/Advantage also includes change management facilities for minimizing the cost of changing and maintaining applications, a tool for building text-based applications and writing application documentation, and a component for planning and managing development activities and projects more effectively.
- Applications developed with AD/Advantage are portable, so they run without modification on a range of open and proprietary systems.
- AD/Advantage is available for IBM PCs and compatibles, IBM mainframes, DEC VAX, Bull, Fujitsu, ICL, NCR, Siemens, Intel 386/486, and Hewlett-Packard computers and OS/2, MS-DOS, DOS/VSE, DOS/VS, MVS/XA, MVS/ESA, MVS/SP, VSE/SP, VSE/ESA, VM/CMS, GCOS 6/7/8, VMS, VMS, MSP, FSP, XSP, B52000, VRX, VRX/E, Bull DPX/2, XCP, ISC, SCO, AT&T SVR4,

ULTRIX, HP-UX, AIX, OSX, DYNIX/PTX, and Sun OS operating environments. Cincom has announced that it is also porting AD/Advantage to DEC's 64-bit Alpha/AXP RISC systems.

MANTIS, a component of AD/Advantage, is Cincom's application development system that is available on many different mainframes and PCs.

- MANTIS provides a set of tools for system development, interactive prototyping and refinement, system testing, and implementation to provide a complete CASE environment. With MANTIS, application development can be done on PCs under DOS and OS/2, increasing developer productivity while reducing development costs.
- Applications developed with MANTIS are portable across several computing platforms, including mainframes, midrange systems, and PCs. Portability is extended beyond the IBM environment to other systems, including DEC VAX, Hewlett-Packard, Bull, NCR, ICL, Wang, Fujitsu, Siemens, and others.
- MANTIS supports: MVS/SP, MVS/XA, MVS/ESA, VSE/SP, DOS/VSE, VM/CMS, VAX/VMS, PC DOS, and OS/2 operating systems; CICS, IMS/DC, and VM/CMS communications monitors; and DB2, SQL/DS, IMS/DB, DL/1, SUPRA, VSAM, RMS and other file structures and data bases.
- During fiscal 1992, a new and enhanced MANTIS was released for IBM's RS/6000 AIX UNIX system and The Santa Cruz Operation (SCO) System V/386 UNIX environment, continuing to fulfill its mission of making MANTIS available on a variety of UNIX platforms.
- Also during fiscal 1992, Cincom announced MANTIS Developer's Workstation 2.1, a PC-based application development environment for creating MANTIS applications that run on MVS, VSE, DOS, OS/2, UNIX, VMS, and other operating environments.
- There are currently over 3,000 MANTIS installations worldwide.

Project Management:

CPCS, Cincom's Enterprise Management and Guidance System, introduced in 1990, supports the proactive management and guidance of business objectives through their process development cycles to ensure that projects are planned accurately, developed within budget, and delivered on time.

- CPCS provides information about all planned, ongoing, or completed work managed within CPCS, including processing, projects, and resources that make up the business objectives.
- CPCS can plan and track business objectives on a departmental, organizational, or enterprisewide basis.
- CPCS is available for MVS, DOS/VSE/SP, VMS, MS-DOS, Windows, OS/2, and UNIX environments.
- There are currently over 60 CPCS installations worldwide.

Manufacturing and Financial Applications:

CONTROL:Manufacturing (C:M) is a modular manufacturing control software system that supports distributed, multisite, multinational organizations.

- C:M contains the following modules: Bill of Materials and Routings, Material Control, Master Production Scheduling, Material Requirements Planning, Shop Floor Control, Purchasing, Cost Management, and Order Management.
- Additional modules are available to tailor the system to discrete, project, repetitive, or process manufacturing environments. These additional modules are: Lot/Serial Number Traceability, Engineering Change Control, Project Manufacturing Control, Project Cost Control, and Repetitive Manufacturing Control.
- During fiscal 1992, Cincom released the Enterprise Analyst series of client/server products for C:M. These consist of desktop decision support tools that present C:M planning, production, and financial data for analysis, and management reporting using a graphical user interface.
- Versions of C:M are available in English, Spanish, French, German, and Swedish.

CONTROL:Financial is a financial applications package designed for the manufacturing environment and is fully integrated with CONTROL:Manufacturing. The modules currently available for CONTROL:Financial include: Accounts Receivable, Accounts Payable, and General Ledger.

The products are currently available for IBM mainframes and DEC VAX systems under their proprietary operating systems.

- Cincom's plans include delivering a new generation of C:M that will incorporate industry standards for open systems in the areas of user interface, data management, communications, and computing platforms. It will also use client-server computing and provide distributed, multisite implementation options.
- In December 1992, Cincom demonstrated a major piece of its open systems strategy for C:M with the shipment of C:M for UNIX platforms, beginning with Hewlett-Packard's HP 9000 Series computer with HP-UX. Availability on DEC ULTRIX systems is scheduled for the first quarter of 1993. Availability is also scheduled for DEC's Alpha AXP system.
- Cincom France has joined DEC's Cooperative Marketing Program for C:M.

There are currently over 400 CONTROL clients worldwide, including Alcatel, Boeing, Ciba-Geigy, DuPont, Emerson Electric, Georgia-Pacific, Hitachi, and ICI Pharmaceuticals.

Text Management:

MANAGE:Series™ text management facilities enable information systems departments to provide end-users with document production systems, integrating the power of corporate applications and data bases. The MANAGE:Series consists of the following components:

- M/TEXT is a mainframe/PC/LAN text processing and text management system that provides word processing, document formatting, printing, document assembly, screen prompter, mail-merge, and other facilities.
- M/SPELL eliminates spelling errors within M/TEXT documents.
- M/ARCHIVE, introduced in 1992, designed specifically for text storage and retrieval. It stores information created by M/TEXT or any word processing or spreadsheet packages in an electronic form on PCs, local-area networks, and mainframe computers.
- M/SERVER transfers documents, data, and other objects between applications across different hardware and software platforms.
- M/POST is the MANAGE:Series electronic mail facility for routing and tracking documents throughout the user community.

The MANAGE:SERIES is available for a range of hardware platforms, including IBM mainframe, PC, LAN, and UNIX environments.

There are currently over 600 MANAGE:SERIES clients worldwide.

Support Services:

Cincom Field Technical Support staff work with customers before, during, and after the software implementation to provide start-up assistance, on-going support, and to coordinate training.

Cincom Client Support personnel help customers use Cincom software with their applications and provide integration services and conversion assistance for clients moving to open systems or downsizing environments.

Cincom Product Support specialists provide in-depth product support.

Cincom Support Connection provides 24-hour hotline telephone support.

CINTERNET is Cincom's international communications network that links offices, agents, and clients in North America, South America, Asia/Pacific, and Europe.

Cincom Education Centers provide a curriculum of hundreds of courses, both in-house and on-site, related to Cincom products and methodologies.

Industry Markets

Cincom markets its products to Fortune 1000 companies across industries and to federal, state, and local government.

Geographic Markets

Approximately 39% of Cincom's fiscal 1992 revenue was derived from the U.S. and 61% from international sources.

A further breakdown of fiscal 1992 revenue follows:

North America	42%
Europe	46%
Asia/Pacific	8%
South America	2%
Other	<u>2%</u>
	100%

The company currently has more than 60 offices in 20 countries and an increasing number of distributors serving other countries. Cincom has clients in 72 countries.

World headquarters are in Cincinnati. U.S. regional offices are located in Atlanta (GA), Boston (MA), Chicago (IL), Cincinnati (OH), Dallas (TX), Detroit (MI), Edison (NJ), Kansas City (KS), Los Angeles and San Francisco (CA), Minneapolis (MN), New York (NY), Philadelphia and Pittsburgh (PA), Phoenix (AZ), Seattle (WA), St. Louis (MO), and Washington, D.C.

Regional international headquarters are located in London (England), Copenhagen (Denmark), Paris (France), Frankfurt (Germany), Tokyo (Japan), Sydney (Australia), Singapore, and Toronto (Canada).

- Other international offices are located in Montreal, Ottawa, and Vancouver (Canada); Maidenhead and Manchester (England); Edinburgh (Scotland); Geneva and Zurich (Switzerland); Brussels (Belgium); Nieuwegein (Netherlands); Eschborn, Dusseldorf, Hamburg, and Stuttgart (Germany); Gothenburg (Sweden); Oslo (Norway); Osaka (Japan); Melbourne (Australia); Wellington (New Zealand); Hong Kong; Rio de Janeiro and Sao Paulo (Brazil); and Monaco.
- Independent agents market Cincom's products in Argentina, Chile, Columbia, Ecuador, Finland, Greece, Guatemala, Indonesia, Israel, Italy, Korea, Malaysia, Mexico, Panama, Peru, the Philippines, Portugal, Saudi Arabia, South Africa, Spain, Taiwan, Thailand, Turkey, Uruguay, Venezuela, and Yugoslavia.

Computer Hardware and Software

Cincom uses a variety of hardware for systems development and internal reporting, including:

- Bull 6,7,8 Series, GCOS
- IBM 4381, 3084, MVS XA, MVS, VSE, VM, CMS
- IBM RS/6000
- DEC VAX 8650, VMS
- DEC Alpha AXP
- DEC Alpha AXP, OpenVMS, OSF/1
- DECstation 5000, ULTRIX
- Data General 4600, DG-UX
- HP 9000, UNIX
- Intel 386/486, DOS 5.0/Windows 3.1, OS/2 1.3, OS/2 2.0, SCO-ODT
- NCR V8500, V9800, UNIX Tower
- Sequent 527, DYNIX/PTX 1.3
- Silicon Graphics Magnum 4000, Windows NT
- Sparc 2, SunOS 4.1.1
- Sparc 10, Solaris 2.1
- Wang V565, V580

COMPANY PROFILE

CINCOM SYSTEMS, INC.

2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Thomas M. Nies, President and CEO
Private Corporation
Total Employees: 1,380
Total Revenue, Fiscal Year End
9/30/90: \$170,000,000 (Est.)

The Company

Cincom Systems, Inc. was incorporated in Ohio in 1968 as a firm specializing in data base software. The company now provides software products in five major areas: relational data base management, manufacturing applications, application development tools, project planning and control, and text management.

Cincom's fiscal 1990 revenue reached \$170 million, marking the 22nd consecutive year that the company has improved its revenues. A five-year revenue summary follows:

CINCOM SYSTEMS, INC. FIVE-YEAR REVENUE SUMMARY* (\$ millions)

ITEM	FISCAL YEAR				
	9/90	9/89	9/88	9/87	9/86
Revenue	\$170.0	\$168.0	\$161.0	\$131.0	\$107.0
• Percent increase from previous year	1%	4%	23%	22%	N/A

* Prior year's results have been restated to reflect a change in the method of accounting for revenue.

The fiscal 1990 year-end figure would have been higher had it not been for Cincom's March 1990 sale of the NET/MASTER network management product to Systems Center, Inc. of Reston (VA) for approximately \$43.5 million.

- NET/MASTER was expected to account for \$30 million in revenue for Cincom for fiscal 1990, but only \$12 million was realized before the product was sold.

- Cincom was still able to overcome the \$18 million deficit caused by the NET/MASTER loss and increased its total year-end revenues by \$2 million over fiscal 1989.

Cincom management expects fiscal 1991 revenue will reach \$188.7 million, an 11% increase over fiscal 1990.

During fiscal 1990, Cincom established three new integrated operating divisions within its corporate structure: the Application Development, Manufacturing Solutions, and Systems Software divisions.

- The formation of these divisions reflects Cincom's efforts to streamline the company into product-specific, self-contained business units. Each division includes sales, service, support, marketing, product engineering, and product management functions for its specific product groups.
- Complementing these product-specific divisions are Cincom's Indirect Marketing, Strategic Alliances, and Finance and Administration divisions.

In August 1990, Cincom announced an agreement with Hewlett-Packard Company to sell and support Cincom's MANTIS application development system on HP 9000 Series 800 Precision Architecture-RISC UNIX systems.

In September 1990, Cincom and Bull HN Information Systems expanded their joint marketing agreement for MANTIS across the full range of Bull hardware platforms.

As of September 30, 1990, Cincom had 1,380 employees (generating \$123,888 in revenue per employee).

Key Products and Services

One hundred percent of Cincom's fiscal 1990 revenue was derived from software products and associated support services. Source of revenue by product line is estimated as follows:

Data base	33%
Application development	26%
Manufacturing	23%
Other	18%
	100%

- The fastest growing sector for Cincom is its manufacturing product line. New business in the U.S. grew by 70% last year.

- Application development products represent Cincom's most profitable product line.
- Data base products are the largest revenue generator and are expected to see tremendous growth because of recently introduced UNIX support.

Cincom currently has over 13,000 product installations in more than 70 countries worldwide.

Relational Data Base Management:

SUPRA is an advanced relational data base management system which offers portability across multiple hardware and operating system platforms including IBM, DEC, and UNIX.

- Based on the ANSI/SPARC Three Schema Architecture, SUPRA adheres to industry standards such as ANSI/ISO SQL and IBM's SAA.
- SUPRA is available for processors running under MVS, MVS/XA, MVS/ESA, VM/CMS, VSE, VSE/ESA, CICS, VMS, UNIX (including RS6000, Sun Sequent, ULTRIX and others), OS/2 and MS-DOS, local-area networks, and mainframe client/server facilities.
- The following are the major components of SUPRA:
 - The Distributed Relational Data Manager (DRDM) provides the user with a view of the data through SQL. DRDM runs as a data server, allowing users to access data with no concern for how or where the data is stored.
 - The Dynamic Physical Data Manager (DPDM) stores all data in a B*tree structure and provides variable length record support, automatic primary key and index creation, data compaction, string column capability, automatic data reorganization, mirror data storage for fault-tolerance, dual logging, user-specific accounting facilities, auditing, and statistic features.
 - The Global Directory is a centralized user-extensible meta data repository that describes the complete data base. It controls and integrates data access, security, and applications development.
 - The Heterogeneous Data Management Processor provides access to other vendors' DBMS products, file structures,

and/or file management systems. It is responsible for the translation of requests sent by the DRDM into the appropriate call sequence of the underlying physical data structures. Users can access VSAM, DPDM, and PDM files without being aware of the data source. Support for DB2, Rdb, RMS, IMS, and DL/1 is planned for future releases of SUPRA.

- SUPRA productivity tools include the following:
 - EASY is a language-free, forms-driven tool designed for novice end users who want to access and maintain the data base, produce reports, create tables, gather statistics, and define screen layouts.
 - SPECTRA is a non-procedural query/report writer.
 - I/SQL is a multi-function tool for application programmers and data base administrators. It is used by programmers to create and test SQL statements and to derive and test views in applications. It assists data base administrators in gathering statistics, auditing, tuning, granting or revoking privileges, and accessing objects contained in the Global Directory.

Application Development:

MANTIS is a complete application development system that addresses all phases of the application life cycle.

- MANTIS automates many complex application development tasks and is integrated with other specialized CASE products to provide a complete CASE environment. With MANTIS, application development can be done on PCs under DOS and OS/2, increasing developer productivity while reducing development costs.
- Applications developed with MANTIS are portable across several computing platforms, including mainframes, midrange systems, and PCs. Portability is extended beyond the IBM environment to other systems, including DEC VAX, Bull, NCR, ICL, Wang, Fujitsu, Siemens, and others.
- MANTIS supports MVS/SP, MVS/XA, MVS/ESA, VSE/SP, DOS/VSE, VM/CMS, PC DOS, and OS/2 operating systems; CICS, IMS/DC, and VM/CMS communications monitors; and DB2, SQL/DS, IMS/DB, DL/1, SUPRA, VSAM, and other data bases.

Project Management:

Cincom's Comprehensive Planning and Control System (C.P.C.S.), introduced in 1990, is a full-function, multiuser, multiproject guidance system to ensure that projects are planned accurately, developed within budget, and delivered on time. C.P.C.S. allows users to manage and allocate resources across the entire application development life cycle and also maintains and manages changes to existing applications.

CONTROL:Manufacturing Applications:

CONTROL:Manufacturing is a modular manufacturing control software system that supports distributed, multisite, multinational organizations. CONTROL contains the following modules: Bill of Materials and Routings, Material Control, Master Production Scheduling, Material Requirements Planning, Shop Floor Control, Purchasing, Cost Management, and Order Management. Additional modules are available to tailor the system to discrete, project, repetitive, or process manufacturing environments. These additional modules are: Lot/Serial Number Traceability, Engineering Change Control, Project Manufacturing Control, Project Cost Control, and Repetitive Manufacturing Control.

CONTROL:Financial is a financial applications package designed for the manufacturing environment and is fully integrated with CONTROL:Manufacturing. The modules currently available for CONTROL:Financial include: Accounts Receivable, Accounts Payable, and General Ledger.

The products are available for IBM mainframes and DEC VAX systems.

Text Management:

Cincom's MANAGE:Series, introduced in 1989, is a text information management system that supports text-related projects such as documentation management, data base marketing, personalized mailings, and automated correspondence. In conjunction with MANTIS, MANAGE:Series allows users to combine text and data applications into one unified system.

Industry Markets

Cincom markets its products to Fortune 1000 companies across industries and to federal, state, and local government.

Geographic Markets

Cincom is an international entity with approximately one-third of its revenues being derived from the U.S. and two-thirds from non-U.S. operations.

The company currently has more than 60 offices in 20 countries and an increasing number of distributors serving other countries. Cincom has clients in more than 70 countries.

- World headquarters are in Cincinnati. U.S. regional offices are located in Atlanta; Boston; Chicago; Cleveland and Columbus (OH); Dallas and Houston (TX); Denver; Detroit; Edison (NJ); Irvine, Los Angeles, and San Francisco (CA); Kansas City; Minneapolis; New York; Orlando; Philadelphia; Phoenix; Pittsburgh; St. Louis; Seattle; and Washington, D.C.
- Regional international headquarters are located in Frankfurt (Germany), Maidenhead (U.K.), Mississauga (Ontario, Canada), Paris (France), Sydney (Australia), and Tokyo (Japan). Other international offices are located in Austria, Belgium, Brazil, Denmark, Holland, Hong Kong, New Zealand, Monaco, Norway, Singapore, Sweden, and Switzerland.
- Independent agents market Cincom's products in Argentina, Chile, Columbia, Equador, Finland, Greece, Guatemala, Indonesia, Israel, Italy, Korea, Malaysia, Mexico, Panama, Peru, the Philippines, Portugal, Saudi Arabia, South Africa, Spain, Taiwan, Thailand, Turkey, Uruguay, Venezuela, and Yugoslavia.

Computer Hardware and Software

Cincom uses a variety of hardware for systems development and internal reporting, including:

- IBM 4381, 3084, MVS XA, MVS, VSE, VM, CMS
- DEC VAX 8650, VMS
- Nixdorf Taragon, UNIX
- Wang V565, V580
- NCR V8500, V9800, UNIX Tower
- HP 9000, UNIX
- Bull 6,7,8 Series, GCOS

COMPANY PROFILE

CINCOM SYSTEMS, INC.

2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Thomas M. Nies, President and CEO
Private Corporation
Total Employees: 1,495
Total Revenue, Fiscal Year End
9/30/87: \$132,000,000

The Company

Cincom Systems, Inc. was incorporated in Ohio in 1968 as a contract programming firm specializing in data base and interactive systems software. The company now provides software products in five major areas: relational data base management, manufacturing applications, application development tools, information center tools, and network management.

Cincom's fiscal 1987 revenue reached \$132.4 million, a 38% increase over fiscal 1986 revenue of \$95.6 million. A five-year revenue summary follows:

CINCOM SYSTEMS, INC. FIVE-YEAR REVENUE SUMMARY (\$ thousands)

ITEM	FISCAL YEAR				
	9/87	9/86	9/85	9/84	9/83
Revenue	\$132,400	\$95,600	\$95,400	\$91,500	\$71,000
• Percent Increase from previous year	38%	--	4%	29%	31%

Cincom expects 1988 revenue to reach between \$165 and \$170 million for a 27% growth rate from the previous year.

Between 1980 and 1987 Cincom has invested over \$100 million in research and development of its TIS/XA product line.

- In 1987, 69% of revenue came from either new or enhanced products, Cincom expects 80% of its 1988 to be derived from new or enhanced products.

Management attributes its growth in 1987 to three areas: the acceptance of SUPRA; a movement towards decentralization and acceptance of DEC VAX machines in the manufacturing industry, contributing to the acceptance of Cincom's CONTROL:Manufacturing™ product; acceptance of MANTIS internationally.

In June, 1988 Cincom announced a computer-aided software engineering (CASE) alliance with Index Technology Corporation of Cambridge (MA), D. Appleton Company of Manhattan Beach (CA), and Aion Corporation of Palo Alto (CA) in order to provide users with a unified set of CASE and other application development tools which address the entire application life cycle.

On November 19, 1987 Cincom announced an alliance with Nixdorf Computer AG, Paderborn, West Germany. The agreement relates primarily to the development and marketing of each company's respective products. Nixdorf Computer provides technological expertise in portable distributed data bases and UNIX operating systems. Nixdorf's marketing and service network serves 44 countries.

Also in 1987, Cincom announced a computer integrated manufacturing (CIM) alliance with the following leading CIM vendors: Litton Industrial Automation Systems, Intergraph, John A. Keane and Associates, and Systonics. The first product to stem from this alliance was an interface from CONTROL:Manufacturing to Epic Data's data collection system.

In 1985 Cincom joined Digital Equipment Corporation's (DEC) Cooperative Marketing Partners program for their TIS/XA product line.

Cincom is organized into six primary business divisions as follows:

- The North American Sales Division performs the sales and support functions for the distribution of Cincom software in the continental U.S. and Canada.
- The International Sales Division performs the sales and support functions for the distribution of Cincom software internationally.
- The Research and Development Division is responsible for research and ongoing development of Cincom's entire product line.

- The Finance and Administration Division is responsible for the international financial, accounting, legal, administrative, personnel, and computer services areas.
- The Indirect Marketing Division oversees all indirect marketing; including licensees, agents, OEM's, joint ventures, and corporate relations with other entities.
- The Marketing and Product Planning Division is responsible for all product and business planning, marketing, market research, and promotional activities on a worldwide basis.

As of September 30, 1987, Cincom had 1,495 employees, segmented as follows:

Marketing/sales	908
Research and development	250
Customer support	167
Computer operations	50
General and administrative	<u>120</u>
	1,495

Competitors include Cullinet, Applied Data Research, Software AG, ASK Computer Systems, and IBM.

Key Products and Services

One hundred percent of Cincom's fiscal 1987 revenue was derived from software products and associated support services. Revenue from Cincom's software products was segmented as follows:

Data base	48%
Application development	24%
Network management	16%
Applications	<u>12%</u>
	100%

In 1978 Cincom began developing "The Information System Extended Architecture" or TIS/XA. TIS/XA is an underlying architecture designed to address the complete needs of today's data processing centers without the need for extensive systems integration procedures when adding new components to an existing system under the TIS/XA architecture. Another important characteristic of TIS/XA is to free the user from vendor/environmental lock-in by acting as an insulator between the applications in use under TIS/XA and the hardware it runs on. TIS/XA consists of the five major components: Relational Data Base Management, Business Control for the Manufacturing

Environment, Application Development Tools, Office Automation Tools, and Network Management.

Relational Data Base Management.

- SUPRA™ is an advanced relational data base management system designed for the IBM environment. SUPRA is available for IBM 30XX, 43XX or compatible processors running under MVS, MVS/XA, VM/CMS, DOS/VSE, VSE/SP 2.1, CICS. SUPRA is a combination of the following elements:
 - The Relational Data Manager provides the user with a logical, relational view of the data being manipulated, independent of the physical environment, and the data manipulations required to properly access and update data.
 - The Physical Data Manager manages the data structures of the physical files in which the data is stored. By reducing physical I/O's, the Physical Data Manager aids in supporting high volume applications. The Physical Data Manager supports multiple data structuring techniques, including indexing, chaining, hashing, clustering, sequential, flat, coded, and more.
 - The In-line Directory controls data access, security, and application development, integrating all components and ensuring that sensitive data is secure from unauthorized users and operations.
 - SPECTRA is a non-procedural data base query and application development tool with full insert, update, and delete capabilities. The system increases flexibility by supporting external files.
 - NORMAL is a data base design tool that automates the process of data normalization. Based on information entered about dependencies, primary keys and domains, NORMAL reconstructs the data views into third normal and generates the appropriate files and navigation strategies.
 - MANTIS is a fourth-generation application development tool that is completely integrated with the company's data base management systems.
 - SUPRA also provides system utilities in three areas, directory maintenance, physical file management, and a data base design analyzer, DBAID, used to test data views before using them in the production environment.

- **ULTRA Relational DBMS™** is essentially the DEC VAX version of SUPRA, but does not contain the NORMAL facility. ULTRA does, however, contain the additional ability to access DEC RMS files.
- Both SUPRA and ULTRA are geared towards transaction processing and high volume environments.

Business Control for Manufacturing.

- **CONTROL:Manufacturing** is a modular manufacturing control software system. CONTROL contains the following modules: Bill of Materials Routings, Material Control, Master Production Scheduling, Material Requirements Planning, Shop Floor Control, Purchasing, Cost Management, and Order Management. Additional modules are available to tailor the system to job shop, repetitive, or process manufacturing environments. Those additional modules are: Lot/Serial Number Traceability, Engineering Change Control, and Project Manufacturing Control.
- **CONTROL:Financial™** is a financial applications package designed for the manufacturing environment and is fully integrated with CONTROL:Manufacturing. The modules currently available for CONTROL:Financial include: Accounts Receivable, Accounts Payable, and General Ledger.
- In 1986 approximately 80% of Cincom's CONTROL product installations were based on IBM mainframe processors, and 20% on DEC VAX processors. In 1987 a complete reversal was experienced and only 20% of new product installations were based on IBM processors and 80% were based on the DEC VAX.
- Cincom plans to release new modules for its CONTROL product line in 1988.

Application Development Tools.

- **MANTIS**, is available for IBM, DEC VAX, WANG VS, Honeywell Bull, and ICL environments. MANTIS can be used in conjunction with Cincom products and can also access VSAM, IMS, ADABAS, and DB2 files.
- **MANTEXT™** is a mainframe, free form, text processing system that enables user to access corporate files for the creation of business documents and corporate mailings.

- MANGRAF™ is a business graphics tool that provides output from on-line applications using centralized production data base information. MANGRAF is only available in some of Cincom's foreign markets, and is in the process of being phased out.

Office Automation Tools.

- SPECTRA (previously mentioned).

Network Management.

- NET/MASTER™ is a network management system for VTAM environments that provides single operator control of a multiple CPU, multiple site, and multiple application network. NET/MASTER consists of the following components:
 - Network Control Language is a 4GL designed for the customization of network presentation, operation and security.
 - Operator Control Services provides operators with a single console view of system operations even for remote network operations.
 - Access Component is the network security component, and may be used in conjunction with other commonly used security systems such as ACF2, RACF, TOP SECRET, and others.
 - Multiple Application Component provides concurrent access to multiple applications and allows operators to manage and control subsystems such as CICS, TSO, IMS/DC, and others.
 - Advanced Network Management Component allows operators to monitor sessions, hardware and network status. Networks can be partitioned into "spans of control" for different operators. All network activity may be logged and the log may be browsed on-line.
 - SYS/MASTER™ Component allows operators to automate many routine tasks for local and remote systems in the network.
 - Transfer Component provides for transmission of bulk data cross domain in a VTAM network.

- **PC CONTACT** is an integrated, interactive, upload/download communication link between IBM 370 architecture processors and the family of IBM personal computers. **PC CONTACT** allows users to extract corporate data from the mainframe host using **MANTIS**. The information can then be downloaded to a PC diskette. Similarly, the user can upload data from the PC back to the mainframe host.

In 1988 Cincom is planning to release versions of its current product line to run under the UNIX operating system. Cincom is also planning to break into the CASE marketplace in 1988. Cincom management says it is looking to form additional alliances in the network management area in the near future.

Industry Markets

Cincom markets its products to Fortune 500 companies across all industries.

Geographic Markets

Cincom is an international entity with 52% of its revenue being derived from foreign operations and 48% from U.S. operations.

The company has 60 offices in 40 countries.

- U.S. regional offices are located in Atlanta, Chicago, Cincinnati, Los Angeles, and Philadelphia. Branch offices are located in Boston, Cleveland, Dallas, Denver, Detroit, Houston, Irvine (CA), Kansas City (KS), Minneapolis, Edison (NJ), New York, Orlando, Phoenix, Philadelphia, Pittsburgh, San Francisco, St. Louis, Seattle, and Washington, D.C.
- European operations are coordinated from Brussels (Belgium), with additional offices located in Denmark, England, France, West Germany, Austria, Holland, Norway, Sweden, Monaco, and Switzerland.
- Other international offices are located in Australia, New Zealand, Hong Kong, Japan, Singapore, Malaysia, and Brazil.
- Independent agents market Cincom's products in Portugal, Finland, Spain, Italy, Yugoslavia, Greece, Lebanon, Saudi Arabia, South Africa, Argentina, Chile, Columbia, Ecuador, Guatemala, Peru, Puerto Rico, Uruguay, Venezuela, Dominican Republic, Philippines, Republic of China, Thailand, Korea, and Indonesia.

**COMPUTER
HARDWARE**

Cincom uses a variety of hardware for systems development and internal reporting, including:

- 2 IBM 3081s, DOS, MVS.
- 1 IBM 4341, DOS.
- 2 DEC VAXs, VMS.
- 1 NCR 8570.
- 1 SEL 32/27.
- 1 PRIME 750.
- 1 FOUR PHASE.
- 1 WANG.
- 1 Data General ECLIPSE.
- 1 Harris 100.

COMPANY PROFILE

CINCOM SYSTEMS, INC.
2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Thomas M. Nies, President and CEO
Private Corporation
Total Employees: 1,400
Total Revenue, Fiscal Year End
9/30/85: \$92,000,000

THE COMPANY

- Cincom Systems, Inc. was incorporated in Ohio in 1968 as a contract programming firm specializing in data base and interactive systems software. The company now provides data base management, data communications, and related systems software; application software; and associated educational and support services to over 7,000 clients in a variety of industries.
- Fiscal 1985 revenue reached \$92 million, an 8% increase over fiscal 1984 revenue of \$85 million. A five-year revenue summary follows:

CINCOM SYSTEMS, INC.
FIVE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM \ FISCAL YEAR	9/85	9/84	9/83	9/82	9/81
Revenue	\$92,000	\$85,000	\$71,000	\$54,000	\$43,000
Percent increase from previous year	8%	20%	31%	26%	20%

- Cincom expects a 25% growth rate for fiscal 1986.
- During 1985 Cincom discontinued marketing efforts on the following products: CRICKET, Total Information System (TIS), LMS-II, and MANCALC. The company introduced new products in 1985, some of which replaced the discontinued products.
- Cincom is organized into six primary business divisions as follows:
 - The North American Sales Division is the marketing/sales division for the distribution of mainframe and minicomputer systems and application software in North America.

- The International Marketing/Sales Division is the marketing/sales group for the direct international distribution of mainframe and mini-computer systems and application software.
 - The International R&D Division is responsible for research and ongoing development of Cincom's entire product line.
 - The International Finance and Administration Division is responsible for the international financial, accounting, legal, administrative, personnel, and computer services areas.
 - The International License Division oversees Cincom's international indirect license distribution channels.
 - The Technology Transfer Division is responsible for the development of third-party agreements, as well as licensing technologies through third parties.
- As of September 30, 1985, Cincom had 1,400 employees, segmented approximately as follows:

Marketing/sales	560
Research and development	280
Software services/customer support	280
Computer operations	70
General and administrative	<u>210</u>
	1,400

- Competitors include Cullinet, Applied Data Research, Software AG, and IBM.

KEY PRODUCTS AND SERVICES

- One hundred percent of Cincom's fiscal 1985 revenue was derived from software products and associated support services. Ninety percent (\$82.8 million) was derived from systems software and 10% (\$9.2 million) was derived from application software products.
- Revenue for fiscal 1985 was derived from the following sources:

Total Information System (TIS)	28%
TOTAL	25
MANTIS	22
ULTRA	4
NET/MASTER	3
Other systems software products	8
Application software products	<u>10</u>
	100%

- Cincom offers approximately 400 software products, most of which are various host computer versions of its major system software products--TOTAL, MANTIS, ULTRA, SUPRA (the replacement product to TIS), and ENVIRON/I. A listing of Cincom software products is provided in the exhibit. Most systems are designed to run on large IBM and compatible mainframes and are fully integrated with SUPRA and TOTAL. There are currently over 18,000 product installations worldwide, available on 32 computers and 46 operating systems.
- Cincom's systems software products contributed 90% to fiscal 1985 revenue and include the following:
 - SUPRA, introduced in 1985, is the replacement product for Cincom's Total Information System (TIS). SUPRA is an advanced relational data base management system for the IBM mainframe environment.
 - The five major components of SUPRA include the following:
 - Relational Data Manager (RDM) supports the three components of the relational data model--structure, manipulation, and integrity.
 - Physical Data Manager (PDM) supports physical data structuring techniques including indexing, hashing, chaining, clustering, sequential, flat, coded, and more.
 - SPECTRA is a relational data base query language used for information retrieval and application development. SPECTRA allows end users to access corporate data non-procedurally, as well as build their own applications. The system increases flexibility by supporting external files.
 - NORMAL is a data base design tool that improves the productivity, accuracy, and effectiveness of the logical and physical data base design process.
 - In-Line Directory controls data access, security, and application development, integrating all components and ensuring that sensitive data is secure from unauthorized users and operations.
 - SUPRA is available for IBM 30XX, 43XX, and compatible computers running on MVS, MVS/XA, DOS/VSE, and VM operating systems.
 - TIS (SUPRA's predecessor product) is an integrated data base system designed for the high-volume data processing environment. TIS was installed at 275 sites as of October 1985. ULTRA is the DEC VAX version of TIS. Components include a data base manager, query system, report writer, teleprocessing monitor, and a procedural language for on-line application development.

EXHIBIT

CINCOM SOFTWARE PRODUCTS

PRODUCT NAME	DESCRIPTION	PRICE	INSTALLATION
<u>SYSTEMS SOFTWARE</u>			
SUPRA	Relational data base system	\$193,000 - \$274,000	New
NORMAL	Data base design tool	\$14,000 - \$25,000	New
SPECTRA	Relational data base query language	\$54,000 - \$65,000	New
TOTAL	Data base management system	\$70,000 (Mainframes) \$20,000 (Minicomputers)	2500 (IBM) 300 (Non-IBM)
NET/MASTER	Network management system	\$20,000 - \$70,000	200
ENVIRON/I	Teleprocessing monitor system	\$50,000	700
MANTIS	Interactive applications development	\$35,000	2200
T-ASK	Interactive DBMS query facility	\$40,000	600
SOCRATES	Report generator	\$27,500	800
PC CONTACT	Micro-to-mainframe interface	\$30,000 (Mainframe) \$500 (per PC)	100
<u>APPLICATION SOFTWARE</u>			
CONTROL: Manufacturing	Manufacturing control system	\$21,000 - \$85,000 (per Module)	200
Bill of Material & Routing			
Material Control			
Master Production Scheduling			
Material Requirements Planning			
Shop Floor Control			
Purchasing			
Cost Management			
Order Entry			
CONTROL: Financial	Financial package	\$65,000 (per Module)	25
Accounts Payable			
Accounts Receivable			
General Ledger			
MANGRAF	Graphics package	\$16,500	30
MANTEXT	Text processing system	\$33,000	150

- The TOTAL Data Base Management System has data independent and structuring capabilities that allow users to develop applications on a modular basis. Other features include multiple search and processing modes, language interfaces, restart/recovery capabilities, and a comprehensive security system.
 - TOTAL runs on all major mainframes, including IBM, Univac, Control Data, Honeywell, Burroughs, RCA, NCR, Siemens, and ICL. Versions are also available for minicomputers manufactured by DEC (PDP-11 and VAX), Interdata, Prime, Honeywell (Level 6), Univac, Harris, Modcomp, SEL, Data General (ECLIPSE), and Wang (VS).
- NET/MASTER, Cincom's Network Management System, provides single operator control of a multiple CPU, multiple site, and multiple application network.
 - NET/MASTER integrates multiple on-line applications including IMS, CICS, TSO, CM, and ENVIRON/I into a single operating environment.
 - The product is available for IBM 43XX, 30XX, or compatible computers under MVS, VS/1, or VSE operating systems.
- ENVIRON/I is an on-line teleprocessing monitor and task management system that allows ease of implementation for complex applications. The system employs virtual memory techniques, is modular in design, and provides conversational programming, simulation capabilities, and statistical utilities. ENVIRON/I can be used in a standalone environment as well as in combination with TOTAL.
- MANTIS is an on-line application development system and programming language using structured coding and top-down design techniques. Users can create screens and files, write programs, test and debug applications, document systems, put systems on security menus, and replace applications for production. MANTIS is available for IBM, Wang VS, Honeywell, ICL, and DEC VAX computers.
- T-ASK is an on-line query system and directory-driven interpretive processor. The system provides a relational view of information contained in the data base and allows the user to develop inquiries and solve ad hoc requests.
- SOCRATES is a data extraction and report generation system that is fully integrated with TOTAL and also supports non-TOTAL files. The system allows extraction of report format options.
- PC CONTACT is an integrated, interactive, upload/download communication link between the IBM 370 architecture and the family of IBM personal computers. PC CONTACT allows users to extract

corporate data from the mainframe host using MANTIS. The information can then be downloaded to a PC diskette. Similarly, the user can upload data from the PC back to the mainframe host.

- Cincom's application software products contributed 10% to fiscal 1985 revenue and include the following:
 - CONTROL:Manufacturing (formerly the Manufacturing Resource Planning System) is an application product available for IBM 43XX, 30XX, and DEC VAX computers and includes the following components:
 - Bill of Material and Routing.
 - Material Control.
 - Master Production Scheduling.
 - Material Requirements Planning.
 - Shop Floor Control.
 - Purchasing.
 - Cost Management.
 - Order Entry.
 - CONTROL:Financial is available for IBM 43XX and 30XX computers and includes the following components:
 - Accounts Receivable.
 - Accounts Payable.
 - General Ledger.
 - MANGRAF is a business graphics tool that provides output from on-line applications using centralized production data base information.
 - MANTEXT is a free form text processing system that enables end users to access corporate files for the creation of business documents and corporate mailings.

INDUSTRY MARKETS

- Cincom's revenue is derived primarily from the manufacturing, banking and finance, utilities, and government segments, although its products are used across all industries. The company's products are used by over half of the Fortune 500.

GEOGRAPHIC MARKETS

- Cincom's fiscal 1985 revenue was derived approximately as follows:

U.S.	58%
Australia	7
England	6
France	5
Belgium	5
Canada	5
Other foreign	<u>14</u>
	100%

- The company has 60 offices in 40 countries.
 - U.S. regional offices are located in Boston, Chicago, Dallas, Philadelphia, San Francisco, and Washington, D.C. Branch offices are located in Atlanta, Buffalo, Cincinnati, Cleveland, Denver, Detroit, Grand Rapids (MI), Greensboro (NC), Houston, Irvine and Los Angeles (CA), Kansas City (KS), Milwaukee, Minneapolis, Edison (NJ), New York, Orlando, Pittsburgh, St. Louis, and Seattle.
 - European operations are coordinated from Brussels (Belgium), with additional offices located in Denmark, England, France, West Germany, Austria, Holland, Norway, Sweden, Monaco, and Switzerland.
 - Other international offices are located in Australia, New Zealand, Hong Kong, Japan, Singapore, Malaysia, and Brazil.
 - Independent agents market Cincom's products in Portugal, Finland, Spain, Italy, Yugoslavia, Greece, Lebanon, Saudi Arabia, South Africa, Argentina, Chile, Columbia, Ecuador, Guatemala, Peru, Puerto Rico, Uruguay, Venezuela, Dominican Republic, Philippines, Republic of China, Thailand, Korea, and Indonesia.

COMPUTER HARDWARE

- Cincom uses a variety of hardware for systems development and internal reporting, including:
 - 2 IBM 3081s, DOS, MVS.
 - 1 IBM 4341, DOS.
 - 2 DEC VAXs, VMS.
 - 1 NCR 8570.
 - 1 SEL 32/27.
 - 1 PRIME 750.
 - 1 Four Phase.
 - 1 Wang.
 - 1 Data General ECLIPSE.
 - 1 Harris 100.

FINANCIAL UPDATE TO PROFILE DATED FEBRUARY 1984

CINCOM SYSTEMS, INC.
2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Thomas N. Nies, President and CEO
Private Corporation
Total Employees: 1,200
Total Revenue, Fiscal Year End
9/30/84: \$89,000,000

CINCOM FIVE-YEAR REVENUE SUMMARY (\$ thousands)

ITEM \ FISCAL YEAR	9/84	9/83	9/82	9/81	9/80
Revenue	\$ 89,000	\$ 71,000	\$ 54,000	\$ 43,000	\$ 35,864
Percent increase from previous year	25%	31%	26%	20%	21%

SOURCE OF REVENUE

- One hundred percent of Cincom's fiscal 1984 revenue was derived from software products and associated support services. A further breakdown of revenue follows:

Type of Software	Percent of Total
Systems software	93%
- IBM mainframe (74%)	
- Non-IBM mainframe (9%)	
- Minicomputer (10%)	
Applications software	<u>7</u>
	100%

- New product offerings include the following:
 - NET/MASTERTM, Cincom's Network Management System, provides single operator control of a multiple-CPU, multiple-site, multiple-application network.
 - NET/MASTER integrates multiple on-line applications including IMS, CICS, TSO, TIS-DC, and ENVIRON/1 into a single operating environment.

- The product is available for IBM 43XX, 30XX, or compatible computers under MVS, VS/1, or VSE. Prices range from \$20,000 to \$70,000.
- SeriesOnePlus^{T.M.} microcomputer decision support software includes file management, spreadsheet, graphics, reporting, and word processing components that are integrated with PC CONTACT, Cincom's main-frame/microcomputer link.
 - Cincom acquired the marketing rights for SeriesOnePlus from Executec Corporation of Dallas during 1984.
 - SeriesOnePlus runs on a variety of microcomputers including the IBM PC, XT or compatibles, TI Professional, Wang PC, and DEC Rainbow 100+.
- CRICKET^{T.M.}, a fourth-generation language for application development at the micro level, is scheduled for availability during 1985.
- Cincom's Business CONTROL^{T.M.} Systems incorporate renamed Cincom products as follows:
 - CONTROL:Manufacturing (formerly the Manufacturing Resource Planning System) is available for IBM 43XX, 30XX, and DEC VAX computers and includes the following components:
 - Bill of Material and Routings.
 - Material Control.
 - Master Production Scheduling.
 - Material Requirements Planning.
 - Shop Floor Control.
 - Purchasing.
 - Cost Management (available in 1985).
 - Order Entry (available in 1986).
 - CONTROL:Financial is available for IBM 43XX and 30XX computers and includes the following components:
 - Accounts Receivable.
 - Accounts Payable (available in 1985).
 - General Ledger (available in 1986).
 - CONTROL software ranges in price from \$45,000 to \$85,000 per module for IBM systems and \$21,000 to \$45,000 per module for DEC systems.

COMPANY HIGHLIGHT

CINCOM SYSTEMS, INC.
2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Thomas N. Nies, President and CEO
Private Corporation
Total Employees: 1,011
Total Revenue, Fiscal Year End
9/30/83: \$71,000,000

THE COMPANY

- Cincom Systems, Inc. was incorporated in Ohio in 1968 as a contract programming firm specializing in data base and interactive systems software. The company now provides data base management, data communications, and related systems software packages, application packages, and educational and support services to over 6,000 clients in a variety of industries.
- Fiscal 1983 revenue reached \$71 million, a 32% increase over the fiscal 1982 revenue of \$54 million. Below is a five-year revenue summary.

CINCOM
FIVE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM \ FISCAL YEAR	9/83	9/82	9/81	9/80	9/79
Revenue	\$71,000	\$54,000	\$43,000	\$35,864	\$29,586
• Percent increase from previous year	31%	26%	20%	21%	19%

- Approximately 22% of fiscal 1983 revenue was used for research and development purposes.
- Cincom management expects fiscal 1984 revenue to reach \$100 million.
- The company is organized into six primary business divisions as follows:
 - The International Marketing/Sales Division is the marketing/sales group for the direct international distribution of mainframe and minicomputer systems and applications software. This group generated approximately 75% of fiscal 1983 revenue.
 - The International Product Engineering Division is responsible for the maintenance and development of all systems software products.

CINCOM SYSTEMS, INC.

- The Ventures Division is responsible for marketing agreements between Cincom Systems and several computer manufacturers that allow the distribution of TOTAL and MANTIS.
 - The International Licensee Division oversees Cincom's international indirect license distribution channels.
 - The Solution Software Division is responsible for the maintenance and development of all application products, including manufacturing and financial products.
 - The Administrative Division is responsible for the international financial, accounting, legal, and administrative areas.
- As of September 30, 1983, Cincom had 1,011 employees, segmented as follows:

Marketing/sales	334
Software services/customer support	557
Computer operations	18
General and administrative	<u>102</u>
	1,011
 - The company currently has over 1,100 employees.
- Major data base software competitors include Cullinet, Applied Data Research, Software AG, and IBM.

KEY PRODUCTS AND SERVICES

- One hundred percent of Cincom's fiscal 1983 revenue was derived from software products and associated support services. A further breakdown of revenue follows (\$ thousands):

<u>Type of Software</u>	<u>Revenue</u>	<u>Percent of Total</u>
Systems software	\$66,030	93%
- IBM mainframe (74%)		
- Non-IBM mainframe (9%)		
- Minicomputer (10%)		
Applications software	<u>4,970</u>	<u>7</u>
Total	\$71,000	100%

- Cincom offers approximately 360 software products, most of which are various host computer versions of its major system software products: TOTAL, ENVIRON/I, MANTIS, ULTRA, and TIS. A listing of Cincom software products is provided in the exhibit. Most systems are designed to run on large IBM and plug-compatible mainframes and are fully integrated with

EXHIBIT

CINCOM SOFTWARE PRODUCTS

PRODUCT NAME	DESCRIPTION	TYPICAL PRICE
<u>SYSTEMS SOFTWARE</u>		
TIS (Total Information System)	Directory-driven DBMS, query, report writer, TP monitor, and utilities systems	\$250,000
TOTAL	Data base management system	\$ 70,000 (Mainframes) \$ 20,000 (Minicomputers)
ENVIRON/1	Teleprocessing monitor	\$ 50,000
MANTIS	Interactive applications development	\$ 35,000
DCS (Data Control System)	Data dictionary/applications development	\$ 45,000
T-ASK	Interactive DBMS query facility	\$ 40,000
SOCRATES	Report Generator	\$ 27,500
LMS-11	On-line Editor and Library System	\$ 23,500
ENV-DATA	On-line data entry system	\$ 16,800
PC Contact	Micro-to-mainframe interface	\$ 60,000 (Mainframe) \$ 1,000 (Per PC)
<u>APPLICATIONS SOFTWARE</u>		
MRPS (Manufacturing Resource Planning System)	Manufacturing control system	\$195,000
Accounts Receivable/Credit Management	Financial Package	\$ 65,000
Accounts Payable	Financial Package	\$ 55,000
MANCALC	Financial Spreadsheet	\$ 19,500
MANGRAF	Graphics Package	\$ 16,500
MANTEXT	Text Processing System	\$ 33,000

TOTAL and TIS. There are currently over 15,000 product installations worldwide, available on 32 computers and 46 operating systems.

- Cincom's systems software products contributed 93% to fiscal 1983 revenue and include the following:
 - TIS (Total Information System) is Cincom's integrated data base system. Designed for the high-volume data processing environment, TIS operates at faster main memory, instead of disk access, speeds. On-line controls and redundant processing insure the system against transaction losses.
 - TIS provides integrated systems management through a central directory. Components include a data base manager, query system, report writer, teleprocessing monitor, and a procedural language for on-line applications development.
 - The system is designed for use with large-scale IBM and DEC VAX equipment, and is being developed for other IBM systems and selected minicomputers. TIS provides users of Series 80 products with complete, upward compatibility and is fully integrated with Cincom's applications software. The system has been installed at over 80 sites.
 - ULTRA, the VAX version of TIS, was officially released in September 1983 and already is installed at 100 sites. Through TIS and ULTRA, applications can be transported between IBM and DEC environments without requiring redevelopment.
 - The TOTAL Data Base Management system contributed 50% of Cincom's fiscal 1983 revenue and has received the ICP award for \$250 million in sales. The system's data independent and structuring capabilities allow users to develop applications on a modular basis. Other features include multiple search and processing modes, language interfaces, restart/recovery capabilities, and a comprehensive security system.
 - TOTAL runs on all major mainframes, including IBM, Univac, Control Data Corporation, Honeywell, Burroughs, RCA, NCR, Siemens, and ICL. Versions are also available for minicomputers manufactured by Digital Equipment (PDP-11 and VAX), Interdata, Prime, Honeywell (Level 6), Univac, Harris, Modcomp, SEL, Data General (ECLIPSE), and Wang (VS).
 - ENVIRON/I is an on-line teleprocessing monitor and task management system that allows ease of implementation for complex applications. The system employs virtual memory techniques, is modular in design, and provides conversational programming, simulation capabilities, and statistical analysis utilities. ENVIRON/I can be used in a standalone environment as well as in combination with TOTAL.

- DCS (Data Control System) has four subsystems: an interactive data dictionary with data entry and query facilities, a systems design facility using structured analysis and top-down design techniques, an on-line programmer workstation that automatically produces all code necessary to access the data base, and a centralized security system.
- MANTIS is an on-line applications development system and programming language using structured coding and top-down design techniques. In a single sitting, users can create screens and files, write programs, test and debug applications, document systems, put systems on security menus, and release applications for production. In addition to IBM, MANTIS will be available for Wang VS and DEC VAX computers in 1984. There are currently over 1,300 installations of MANTIS.
- T-ASK is an on-line query system and directory-driven interpretive processor. The system provides a relational view of information contained in the data base and allows the user to develop inquiries and solve ad hoc requests.
- SOCRATES is a data extraction and report generation system that is fully integrated with TOTAL and also supports non-TOTAL files. The system allows for efficient extraction of information from a complex data base and offers a wide range of report format options.
- LMS-II is an on-line editor and library product providing interactive program development and testing, maintenance, and operations control. Features include on-line printing capabilities, logical deletion, complete audit trail and restore facilities, and full recovery at the task/terminal level. Editing functions include string search and replacement, forward and background paging, and full-screen editing. The system's text editor is being enhanced to provide complete word processing capabilities.
- ENV-DATA is an on-line data entry, collection, editing, and validation system. A map definition facility allows users to define their own input screens and field validation criteria. Data is entered directly by the end user, verified, and used to update files, or it is stored for batch processing.
- Cincom's applications software products contributed 7% to fiscal 1983 revenue and include the following:
 - The Manufacturing Resource Planning System (MRPS), a complete manufacturing production and inventory control system, has been installed at over 110 sites. It is composed of the following five modules that operate in either on-line or batch modes.
 - The Foundation Module establishes the system framework and stores and maintains all required manufacturing data, including

bill of materials, routings, and cost. The module provides for material, system, and standards control.

- The Manufacturing Material Planning System (MMPS) enables users to plan, schedule, dispatch, and monitor priorities to control inventories.
- The Master Production Scheduling System (MPSS) provides for resource capacity planning and master production scheduling.
- The Production Planning and Control System (PPCS) handles work center and routing standards, shop floor control, capacity requirements planning, and work-in-progress activity reporting.
- The Vendor Analysis and Purchasing System (VAPS) controls vendor delivery schedules and price variances.
- In 1983 Cincom released an Accounts Receivable/Credit Management package that is fully integrated with TIS. In early 1984 a compatible Accounts Payable system will be made available.
- EPOCH-FMS, a financial management applications tool introduced in 1980, is no longer actively marketed.
- Recent announcements made by Cincom include the following:
 - In early 1984, Cincom will be releasing a series of mainframe-based decision support tools known as the Manage Series. The first three components of this series include MANCALC, a financial spreadsheet, MANGRAPH, a graphics package, and MANTEXT, a text processing system.
 - Additional components under development include an electronic mail system, an agenda management system, a document retrieval system, a scaled-down data base management system, a simple-to-use query language, and a statistical analysis package. All packages will be integrated within the TIS framework but will have the ability to be used as standalone products.
 - In January 1984 Cincom announced PC Contact, a micro-to-mainframe interface that permits users to upload or download data, performs 3270 emulation on a micro workstation, and offers key saving features for audit trails.
 - Later in 1984 Cincom will release Cricket, an execute-only subset of MANTIS, for application development at the micro level.
 - Cincom is pursuing discussions with a microcomputer decision support company for a possible joint venture.

INDUSTRY MARKETS

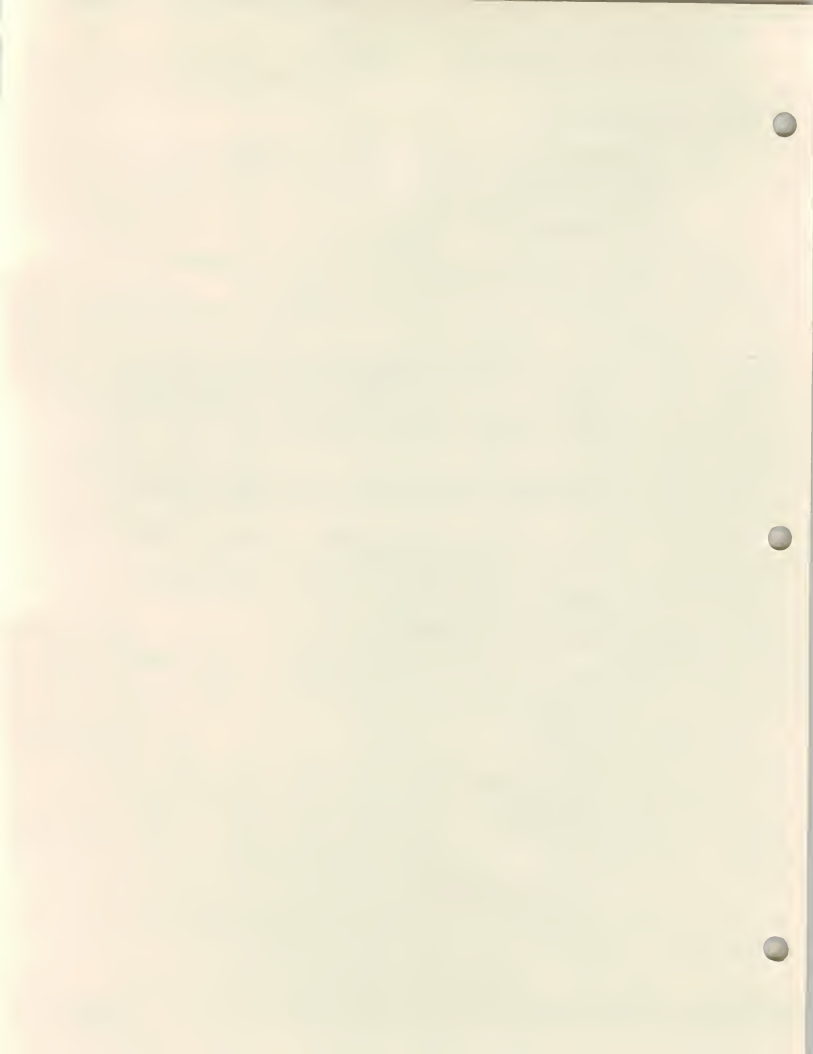
- Cincom's primary revenue is derived from the manufacturing, utilities, and government segments, although its products are used across industry lines. The company's products are used by two-thirds of Fortune's Top 100 and by about half of the Fortune 500.

GEOGRAPHIC MARKETS

- Fifty-five percent of Cincom's revenue is derived from the U.S. and 45% is derived from international sources.
- The company has 58 offices and supports 26 independent agents in 36 countries.
 - U.S. regional offices are located in Boston, Chicago, Dallas, Philadelphia, San Francisco, and Washington, D.C. Branch offices are located in Boston, Buffalo, Cincinnati, Denver, Detroit, Grand Rapids, Houston, Columbus, Irvine (CA), Kansas City, Kernersville (NC), Los Angeles, Minneapolis, Philadelphia, Pittsburgh, St. Louis, Seattle, and Verona (NJ).
 - European operations are coordinated from Brussels, Belgium with additional offices located in England, France, West Germany, Switzerland, Sweden, Denmark, and Holland.
 - Other international offices are located in Australia, Canada, New Zealand, Japan, Hong Kong, and Brazil.
 - Independent agents market Cincom's products in South America, the Middle East, Africa, and Eastern Europe.

COMPUTER HARDWARE AND SOFTWARE

- Cincom uses a variety of computer hardware for systems development and internal reporting, including:
 - 2 IBM 3083s.
 - 1 IBM 4341.
 - 1 IBM 4331.
 - 1 NCR 8570.
 - 2 DEC VAX-11/780s.
 - 1 SEL 32/27.
 - 1 Univac V77.
 - 1 PRIME 750.
 - 1 Four Phase.
 - 1 Wang.
 - 1 Gould-SEL.
 - 1 Data General ECLIPSE.
 - 1 Harris/100.



COMPANY HIGHLIGHT

CINCOM SYSTEMS, INC.

2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Thomas M. Nies, President and CEO
Private Corporation
Total Employees: 727
Total Revenue, Fiscal Year End
9/30/81: \$43,000,000

THE COMPANY

- Cincom Systems, Inc. was incorporated in Ohio in 1968 as a contract programming firm specializing in data base and interactive systems software. The company now provides data base management, data communications, and related systems software packages, applications packages, and educational and support services to over 5,200 clients in a variety of industries.
- Fiscal 1981 revenue reached \$43 million, a 20% increase over 1980 revenue of \$35.9 million. Revenue growth for the past five years is as follows:

CINCOM
FIVE-YEAR REVENUE SUMMARY

ITEM \ FISCAL YEAR	9/81	9/80	9/79	9/78	9/77
Revenue	\$43,000	\$35,864	\$29,586	\$24,808	\$18,620
Percent increase from previous year	20%	21%	19%	33%	31%

- Approximately 20% of fiscal 1981 revenue was used for research and development purposes.
- Cincom management expects 1982 revenue to reach \$52 million.
- The company is organized into seven business divisions.
 - The Systems Software Division is the direct international distribution channel for mainframe and minicomputer systems software products, and generated approximately 75% of fiscal 1981 revenue.
 - The Ventures Division is responsible for marketing agreements between Cincom Systems and several computer manufacturers that allow the distribution of TOTAL.

CINCOM SYSTEMS, INC.

- The International Licensing Division oversees Cincom's international licenses and OEM distribution channels.
- The Manufacturing Applications Division and the Financial Applications Division are the direct distribution channels for the respective applications products.
- In addition, there are Educational Services and Administrative Divisions. Cincom no longer operates a separate Professional Services Division, as these services are now provided by other divisions.
- The 727 employees of Cincom Systems are divided as follows:

Marketing/sales	100
Software services/customer support	525
Computer operations	12
General and administrative	<u>90</u>
	727
- Major data base software competitors include Cullinane Database Systems, Applied Data Research, Software AG, and IBM.

KEY PRODUCTS AND SERVICES

- Cincom's fiscal 1981 revenue is distributed as follows:

<u>Type of Service</u>	<u>Percent of Total Revenue</u>	<u>Revenue (\$ thousands)</u>
Software products		
• Systems software	90%	\$38,700
- IBM mainframe (76%)		
- Non-IBM mainframe (4%)		
• Minicomputers (10%)		
• Applications packages	4%	\$ 1,720
Professional services	<u>6%</u>	<u>\$ 2,580</u>
	100%	\$43,000

- Cincom offers approximately 355 software products, most of which are various host computer versions of its major Series 80 products: TOTAL, ENVIRON/1, and MANTIS. A listing of Cincom software products is provided in the exhibit. Most systems are designed to run on large IBM and plug compatible mainframes and are fully integrated with TOTAL. There are currently over 12,000 product installations worldwide, available on 32 computers and 46 operating systems.
- The TOTAL data base management system contributed 60% of Cincom's fiscal 1981 revenue and has received the ICP award for \$250 million in

CINCOM SOFTWARE PRODUCTS

PRODUCT NAME	DESCRIPTION	TYPICAL PRICE
<u>Systems Software</u>		
TOTAL	Data base management system (DBMS)	\$ 70,000 (Mainframes) \$ 20,000 (Minicomputers)
ENVIRON/I	Teleprocessing monitor	\$ 50,000
MANTIS	Interactive applications development	\$ 35,000
DCS (Data Control System)	Data dictionary/applications development	\$ 45,000
T-ASK	Interactive DBMS query facility	\$ 37,000
SOCRATES	Report generator	\$ 27,500
LMS-II	On-line editor and library system	\$ 23,500
ENV-DATA	On-line data entry system	\$ 16,800
TIS (Total Information System)	Directory-driven DBMS, query, report writer, TP monitor, and utilities system	\$250,000
<u>Applications Software</u>		
MRPS (Manufacturing Resource Planning System)	Manufacturing control system	\$150,000
EPOCH-FMS	Financial applications development system	\$100,000

sales. The system's data independence and structuring capabilities allow users to develop applications on a modular basis. Other features include multiple search and processing modes, language interfaces, restart/recovery capabilities, and a comprehensive security system.

- TOTAL runs on all major mainframes including IBM, Univac, Control Data Corporation, Honeywell, Burroughs, RCA, NCR, Siemens, and ICL. Versions are also available for minicomputers manufactured by Digital Equipment (PDP-11 and VAX), Interdata, Prime, Honeywell (Level 6), Univac, Harris, Modcomp, SEL, and Data General (ECLIPSE). TOTAL will be available on Wang VS processors in 1982.
- ENVIRON/I is an on-line teleprocessing monitor and task management system which allows ease of implementation for complex applications. The system employs virtual memory techniques, is modular in design, and provides conversational programming, simulation capabilities, and statistical analysis utilities. ENVIRON/I can be used in a standalone environment as well as in combination with TOTAL.
- DCS (Data Control System) has four subsystems: an interactive data dictionary with data entry and query facilities; a systems design facility using structured analysis and top-down design techniques; an on-line programmer workstation which automatically produces all code necessary to access the data base; and a centralized security system.
- MANTIS is an on-line applications development system and programming language using structured coding and top-down design techniques. In a single sitting, users can create screens and files, write programs, test and debug applications, document systems, put systems on security menus, and release applications for production.
- T-ASK is an on-line query system and directory-driven interpretive processor. The system provides a relational view of information contained in the data base and allows the user to develop his own inquiries and solve ad hoc requests.
- SOCRATES is a data extraction and report generation system which is fully integrated with TOTAL and also supports non-TOTAL files. The system allows for efficient extraction of information from a complex data base and offers a wide range of report format options.
- LMS-II is an on-line editor and library product providing interactive program development and testing, maintenance, and operations control. Features include on-line printing capabilities, logical deletion, complete audit trail and restore facilities, and full recovery at the task/terminal level. Editing functions include string search and replacement, forward and backward paging, and full-screen editing. The system's text editor is being enhanced to provide complete word processing capabilities.

CINCOM SYSTEMS, INC.

- ENV-DATA is an on-line data entry, collection, editing, and validation system. A map definition facility allows the user to define his own input screens and field validation criteria. Data is entered directly by the end user, verified, and used to update files or stored for batch processing.
- TIS (Total Information System) is Cincom's new integrated data base system. Designed for the high-volume data processing environment, TIS operates at faster main memory, instead of disk access, speeds. On-line controls and redundant processing ensure the system against transaction losses.
 - TIS provides integrated systems management through a central directory. Components include a data base manager, query system, report writer, teleprocessing monitor, and a procedural language for on-line applications development.
 - The system is designed for use with large-scale IBM and DEC VAX equipment, and is being developed for the IBM 4331 and selected minicomputers. TIS provides users of Series 80 products with complete, upward compatibility and is fully integrated with Cincom's applications software. The system has been tested at 25 sites.
- Cincom began offering applications software products in 1979 in order to diversify its product line. Current products include manufacturing control and financial management systems.
 - The Manufacturing Resource Planning System (MRPS), a complete manufacturing production and inventory control system, is composed of the following five modules which operate in either on-line or batch modes:
 - The Foundation Module establishes the system framework and stores and maintains all required manufacturing data, including bill of materials, routings, and cost. The module provides for material, system, and standards control.
 - The Manufacturing Material Planning System (MMPS) enables users to plan, schedule, dispatch, and monitor priorities to control inventories.
 - The Master Production Scheduling System (MPSS) provides for resource capacity planning and master production scheduling.
 - The Production Planning and Control System (PPCS) handles work center and routing standards, shop floor control, capacity requirements planning, and work-in-progress activity reporting.

CINCOM SYSTEMS, INC.

- The Vendor Analysis and Purchasing System (VAPS) controls vendor delivery schedules and price variances.
- EPOCH-FMS, a financial management applications tool, was introduced in 1980. Cincom modified the package, which was originally developed by a Swedish firm (EUROC AB), to adapt it for use with TOTAL.
- The directory-driven system includes general ledger, budgeting, cost control, project management, and financial reporting. Applications development, testing, maintenance, and report distribution can be performed by non-data processing personnel.
- Professional services, including custom programming and systems design, accounted for 6% of Cincom's fiscal 1981 revenue. These services have been de-emphasized, and continue to contribute an increasingly smaller percentage of total revenue.
- Cincom recently opened new distribution channels through various OEMs in the United States. The company currently has 15 contracts and plans to actively pursue this area.

INDUSTRY MARKETS

- Cincom's primary revenue is derived from the manufacturing, utilities, and government segments, although its products are used across industry lines. The company's products are used by two-thirds of Fortune's Top 100 and about half of the Fortune 500.

GEOGRAPHIC MARKETS

- Fifty-five percent of Cincom's revenue stems from the U.S., and 45% is derived from international sources.
- The company has 42 offices and supports 26 independent agents in 36 countries.
- U.S. regional offices are located in Atlanta, Chicago, Dallas, New York, San Francisco, and Washington, D.C. Branch offices are located in Boston, Buffalo, Cincinnati, Denver, Detroit, Grand Rapids, Houston, Irvine (CA), Kansas City, Kernersville (NC), Los Angeles, Minneapolis, Philadelphia, Pittsburgh, St. Louis, Seattle, and Verona (NJ).
- European operations are coordinated from Brussels, Belgium, with additional offices located in England, France, West Germany, Switzerland, Sweden, Denmark, and Norway.
- Other international offices are located in Australia, Canada, New Zealand, Japan, Hong Kong/China, and Brazil.

CINCOM SYSTEMS, INC.

- Independent agents market Cincom's products in South America, the Middle East, Africa, and Eastern Europe.

COMPUTER HARDWARE AND SOFTWARE

- Cincom utilizes a variety of computer hardware for systems development and internal reporting, including:
 - IBM 370/145, 4331, and 4341.
 - NCR 8550.
 - DEC VAX-11/780.
 - SEL 32/75.
 - Univac V77.
 - Modcomp IV.
 - PRIME 750.
 - Four Phase.
 - Wang.

COMPANY HIGHLIGHT

CINCOM SYSTEMS, INC.
2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Tom Nies, President and CEO
Private Corporation
Total Employees: 600
Total Revenues, Fiscal Year End
9/30/80: \$35,864,000

THE COMPANY

- Cincom Systems, Inc. was incorporated in Ohio in 1968 as a contract programming firm specializing in data base and interactive systems software. The company now provides data base management, data communications and related systems software packages, applications packages and consulting services to companies in a variety of industries.
- Fiscal year 1980 revenues reached approximately \$36 million, a 21% increase over 1979 revenues of \$30 million. Revenue growth for the past five years is as follows:

CINCOM
FIVE-YEAR REVENUE SUMMARY
(\$Thousands, FYE 9/30)

ITEM \ FISCAL YEAR	1980	1979	1978	1977	1976
Revenues	\$35,864	\$29,586	\$24,808	\$18,620	\$14,256
Percent increase from previous year	21%	19%	33%	31%	37%

- Cincom management expects 1981 revenues to reach \$50 million, which would be a gain of 39%. Total company revenues are expected to increase from 20% to 25% per year for the next three to five years.
 - Revenues from the new applications packages are expected to increase between 25% and 35% in 1981, while revenues from systems software products will increase from 18% to 25%.
- With an estimated share of 50% of the installed independent DBMS market, Cincom management decided that deeper penetration of this market would require a larger sales force. As a result, the company has started to invest in the development of applications software based on their software products for targeted vertical markets.

COMPANY HIGHLIGHT/CINCOM SYSTEMS, INC.

- During 1980, Cincom introduced several new or enhanced products including:
 - Manufacturing Resource Planning System (MRPS).
 - Financial Management System (EPOCH).
 - Interactive Application Development System (MANTIS).
- Cincom Systems, Inc., is organized into eight business divisions.
 - The Systems Software Division is the direct international distribution channel for mainframe and minicomputer systems software products.
 - The Ventures Division is responsible for marketing agreements between Cincom Systems and several computer manufacturers that allow the distribution of TOTAL.
 - The International Licensing Division oversees Cincom's international licenses and OEM distribution channels.
 - The Manufacturing Applications Division and the Financial Applications Division are the direct distribution channels for the respective application products.
 - In addition there are Educational Services, Professional Services (consulting) and Administrative divisions.
- The 600 employees of Cincom Systems, Inc., are divided as follows:

- Marketing/sales	75
- Software services/customer support	435
- Computer operations	12
- General and administrative	<u>78</u>
	600

KEY PRODUCTS AND SERVICES

- Cincom's revenue is distributed as follows:

Type of Service	Percent of Total Revenue	\$Thousands
Software products		
• Systems software	85%	\$30,485
• Applications packages	<u>5</u>	<u>1,793</u>
	90%	32,278
Professional services	<u>10</u>	<u>3,586</u>
	100%	\$35,864

COMPANY HIGHLIGHT/CINCOM SYSTEMS, INC.

- Cincom offers some 355 software products, many of which are various host computer versions of its major products: TOTAL, Environ/I, TIS, MANTIS, MRPS and EPOCH.
- Descriptions and sales information for Cincom's major products are contained in the following chart:

MAJOR CINCOM PRODUCTS

PRODUCT NAME	DESCRIPTION	NUMBER INSTALLED	AVERAGE PRICE
TOTAL	Data base management system (DBMS)	Mainframes: 2,000 Minis: 1,500	\$ 50,000
ENVIRON	Teleprocessing monitor	500	\$ 30,000
TIS (Total Information System)	Directory-driven DBMS query, report writer, TP monitor and utilities system	10	\$250,000
MANTIS	Interactive application development	100	\$ 30,000
T-ASK	Interactive DBMS query facility	55	\$ 29,000
ENV-DATA	On-line data entry system	45	\$ 9,500

- TOTAL contributes 60-70% of Cincom's revenues. Since it was first introduced in 1969, TOTAL has generated over \$100 million in revenues for the company. It is available on all major mainframes including IBM, Univac, Control Data Corporation, Honeywell, Burroughs, RCA, NCR, Siemens and ICL. Versions are also available for minicomputers manufactured by Digital Equipment (PDP/11 and VAX), Interdata, Prime, Honeywell (Level 6), Univac, Harris, Modcomp and SEL.
- Cincom's first application package, Manufacturing Resource Planning System (MRPS), is composed of five modules. Introduced in 1979, MRPS operates with TOTAL, thereby providing hardware and software independence. Because of its integration with TOTAL, users can modify and enhance the system with a minimal amount of effort. Each module operates in either on-line or batch modes.

COMPANY HIGHLIGHT/CINCOM SYSTEMS, INC.

- At the heart of the system is the Foundation Module, MRPS Release 2.0, which can operate as a standalone system for inventory control. This Foundation Module stores and maintains all required manufacturing data, such as bill of materials, routings and costs.
 - The Foundation Module is a prerequisite for the other four MRPS modules and provides for material control, system control and standards control.
 - There are approximately 40 installations of the Foundation Module, priced at \$50,000 each.
- The second available module is the Manufacturing Materials Planning System (MMPS), which was introduced in 1979. MMPS is used in conjunction with the Foundation Module and costs an additional \$30,000.
 - It provides for material requirements planning and has been installed in approximately 40 user sites.
- The third available module is the Master Production Scheduling System (MPSS), which was introduced in December 1980.
 - It sells for \$35,000 and provides for resource capacity planning and master production scheduling.
- Two additional modules of MRPS are currently under development: Production Planning and Control System (PPCS) and the Vendor Analysis and Purchasing System (VAPS).
 - Production Planning and Control System will handle work center and routing standards, shop floor control, capacity requirements planning and work-in-process activity reporting. The projected cost will be \$45,000.
 - Vendor Analysis and Purchasing System is intended to control purchasing and will sell for \$35,000.
- Cincom began offering EPOCH-FMS, a software package for financial management applications, in 1980. Cincom modified the package, which was originally developed by a Swedish firm (EUROC AB), to adapt it for use with TOTAL.
- EPOCH-FMS is a financial management software tool that enables the accounting, professional or financial systems analyst to develop general accounting applications. All application development, testing and maintenance can be carried out without programming skills. Using a directory-driven approach, validation, processing, mapping and retrieval of financial data are all performed in accordance with the information contained in the directory.

COMPANY HIGHLIGHT/CINCOM SYSTEMS, INC.

- . EPOCH-FMS costs \$60,000. There are 35 installations to date.
- . It is available for all IBM and IBM-compatible computers using one or more of the following operating systems: DOS/VS, DOS/VSE, OS/VS.
- Software services account for 10% of Cincom's revenues; 7% is derived from professional services, including custom programming and systems design, while 3% is generated by educational services to both clients and nonclients.

INDUSTRY MARKETS Cincom's primary revenues are derived from the manufacturing, utilities and government segments, although its products are used across industry lines.

GEOGRAPHIC MARKETS

- Forty-five percent of Cincom's revenues stem from the U.S., and 55% are derived from international sources.
 - The company has 25 U.S. sales offices and operates in 13 foreign countries. Its international operations are coordinated from Brussels.
 - In addition, there are 57 international licensees marketing Cincom's products in South America, the Middle East, Africa and Eastern Europe.

COMPUTER HARDWARE AND SOFTWARE

- Cincom utilizes a variety of computer hardware for system development and internal reporting, including:
 - IBM 370/145 and 4331.
 - NCR 8550.
 - DEC VAX 11/780.
 - SEL 32/75.
 - Univac V77.
 - Modcomp IV.
 - PRIME 750.
 - Four Phase.

COMPANY HIGHLIGHT

CINCOM SYSTEMS, INC.
2300 Montana Avenue
Cincinnati, Ohio 45211
(513) 662-2300

✓
Tom Nies, Chief Executive Officer
Private corporation
Computer services employees: 305
Revenues, fiscal year end 9/76:
\$15.5 million E*

9/77 = R.S.

COMPANY BACKGROUND:

- Cincom Systems, Inc. provides data base management and data communications software packages and consulting services to companies in a variety of industries.
- It is a private company, founded by CEO Tom Nies and incorporated in Ohio in 1965.

OVERALL ASSESSMENT:

- Cincom has experienced a rapid growth in annual revenues from \$6.8 million in 1974 to an estimated \$15.5 million revenues in 1976.
- Its largest revenue generator, a data base management system called TOTAL, is installed on 1000 systems. Therefore, Cincom has the largest installed base of independently marketed data base systems in the world.
- Cincom now claims a 50% share of the data base management market.
- Cincom is in an excellent position to profit from the expected rapid growth of the data base markets because of its already large market share of installed data base management systems and its commitment to product enhancements. In addition, data communications products will enable it to participate in the growing market for distributed processing.
- Cincom has consistently emphasized product enhancement.
 - Within the next few weeks it will announce that TOTAL is available on Burroughs mainframes.
 - TOTAL is currently licensed to a services vendor which offers Cincom products over its remote batch network. Discussions are underway for a similar licensing agreement with a timesharing vendor.

*E - sales estimate by Cincom management

December/1976

48.1

INPUT

COMPANY HIGHLIGHTS/CINCOM SYSTEMS, INC.

KEY PRODUCTS AND SERVICES:

- Cincom offers two basic services to its clients: data communications and data base management software packages, which generate more than 90% of annual revenues; and software services, which generate the remaining revenues.
- The software products are:
 - TOTAL, a Data Base Management System. It is currently available for IBM, Univac, CDC, ICL, DEC, Honeywell, Varian, Hitachi and Nippon mainframes.
 - Environ/1, an on-line telecommunications control package, available for IBM 360/370 machines.
 - Socrates, a generalized extract and reporting system, available with TOTAL on IBM mainframes.
 - Software services, primarily consulting, are available for user support only.

APPLICATIONS: Cincom's product line is limited to data base and data communications applications software.

INDUSTRY MARKETS: Cincom's industry penetration reflects that of the software industry at large; consequently, its primary revenues are derived from the manufacturing, utilities, and government industries.

GEOGRAPHIC MARKETS:

- Cincom products are installed throughout the U.S. and in Europe, Japan, Australia, and South America.
- The regions of its major product density in the United States follow that of the installation of computer systems nationwide
- TOTAL is also marketed by Varian, Harris, Nippon and Data Logi
Cincom's interactive clear language is also marketed by Honey
and NCR.

COMPUTER HARDWARE AND SOFTWARE: Cincom does not provide on-line computer services.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1995

Cisco Systems, Inc.

Chairman: John P. Morgridge
President & CEO: John Chambers
170 West Tasman Drive
San Jose, CA 95134-1706
Phone: (408) 526-4000
Fax: (408) 526-4100



Status: Public
Employees: 2,443 (9/94)
Revenue: \$1,242,975,000
Fiscal Year End: 7/31/94

Key Points

- Cisco Systems is a leading supplier of internetworking products that link different computer networks together and allow them to communicate.
- On January 31, 1995, John Morgridge, former president and CEO, became chairman of the board. John Chambers took over as president and CEO.

- In January 1995, Cisco acquired Lightstream Corp., which is now known as Cisco's Lightstream Business Unit.
- In December 1994, Cisco acquired Kalpana, Inc., a leading provider of Ethernet switches.
- In August 1994, Cisco completed the acquisition of Newport Systems Solutions which is now part of Cisco's Access Business Unit.

Company Description

Cisco Systems, Inc., founded in 1984, develops, manufactures, markets and supports multiprotocol internetworking systems and software for enterprise-wide

networks. The company's products include a suite of routers, bridges, Ethernet, Token Ring and ATM switches, access servers and router management applications.

Organization and Structure

Cisco is headquartered in San Jose (CA). The company is organized into five main business units as follows:

- Workgroup Business Unit
- Access Business Unit
- Lightstream (ATM high-end) Business Unit
- Core Business Unit
- IBM Business Unit

Company Strategy

Cisco's goal is to become a truly global company. The company has leveraged various technical and distribution agreements with leading players in the networking industry. The company has formed several marketing and technical partnerships with service providers, switch vendors, hub providers as well as systems integrators in order to remain competitive in a dynamic marketplace.

Cisco develops products that comply with industry standards that allow interoperability among disparate systems.

- Cisco's products are based on data networks such as Ethernet, Token Ring, FDDI, CDDI, ATM, Frame Relay, ISDN, SMDS and X.25.
- The company's products support communication protocols that include AppleTalk, Banyan VINES, DECnet, Novell IPX, OSI, SDLC, SNA, TCP/IP, XNS and bridging.

Financials

Cisco's fiscal 1994 revenue exceeded \$1.24 billion, a 92% increase over fiscal 1993 revenue of \$649.0 million. Net income was \$314.9 million in fiscal 1994, compared to net income of \$172.0 million in fiscal 1993.

A five-year financial summary is shown on the following page.

Revenue growth in fiscal 1994 was mainly due to the following:

- Increased sales of Cisco 3000, Cisco 4000 and Cisco 7000 routers
- New product sales (Cisco 2500 and Cisco 7010)
- A rise in sales of add-on boards
- Growth in international sales

Cisco Systems
Five-Year Financial Summary
(\$ Millions, except per share data)

Item	Fiscal Year				
	7/94	7/93	7/92	7/91	7/90
Revenue	\$1,242.9	\$649.0	\$339.6	\$183.2	\$69.8
• Percent change from previous year	92%	91%	85%	162%	152%
Income before taxes	\$509.5	\$275.1	\$136.1	\$70.8	\$23.5
• Percent change from previous year	85%	102%	92%	201%	236%
Net income	\$314.9	\$172.0	\$84.4	\$43.2	\$13.9
• Percent change from previous year	83%	104%	95%	211%	231%
Earnings per share	\$1.19	\$0.67	\$0.33	\$0.17	\$0.06
• Percent change from previous year	78%	103%	94%	183%	N/A

Research and development expenditures were approximately \$88.8 million (7% of revenue), \$44.3 million (7% of revenue) and \$26.7 million (8% of revenue) in fiscal 1994, fiscal 1993 and fiscal 1992 respectively.

Interim Results

Revenue for the six months ending January 29, 1995 was \$847.8 million, compared to \$550.6 million for the same period in 1993. Net income was \$152.3 million, compared to net income of \$141.0 million for the same period a year ago.

Market Financials

Cisco markets its products to various vertical markets, including industrial, financial, telecommunications, service, retail, government and education. To date, Cisco has

an installed base of more than 250,000 internetworking products for more than 20,000 customers in more than 40 countries.

Geographic Markets

In fiscal 1994, revenue derived from the U.S. increased by about 97% over that of fiscal 1993.

A summary of source of revenue appears on the following page.

International sales, primarily to Europe, the Pacific region and Canada were \$520.5 million in fiscal 1994, compared to \$252.9 million in fiscal 1993 and \$122.3 million in fiscal 1992. Export sales in these regions were \$376.2 million in 1994, \$166.3 million in 1993 and \$77.7 million in 1992.

Cisco Systems
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

Geographic Market	Fiscal Year					
	7/94		7/93		7/92	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$864.4	70%	\$463.4	71%	\$249.4	73%
Export Sales	376.2	30%	166.3	26%	77.7	23%
Other international	144.2	12%	86.6	13%	44.6	13%
(Eliminations)	(141.9)	(12%)	(67.3)	(10%)	(32.1)	(9%)
Total	\$1,242.9	100%	\$649.0	100%	\$339.6	100%

Acquisitions

Significant acquisitions made by Cisco over the past two years include the following:

- In January 1995, Cisco acquired Lightstream Corp. of Billerica (MA).
 - Lightstream manufactures enterprise-level ATM switches (Lightstream 2020).
 - Lightstream has formed a core unit within Cisco, known as the Lightstream Business Unit.
 - The acquisition was accounted for as a pooling of interests.
- In December 1994, Cisco acquired Kalpana, Inc., a privately held company based in Sunnyvale (CA).
 - Kalpana manufactures and markets Ethernet switches.
 - At the time of the acquisition, Kalpana had approximately 150 employees.
 - The acquisition was accounted for as a pooling of interests.

- In August 1994, Cisco acquired Newport Systems Solutions, Inc., a privately held networking company.
 - Newport provides software-based routers for remote network sites.
 - The transaction was accounted for as a pooling of interests.
- In September 1993, Cisco acquired Crescendo Communications, a workgroup systems company.
 - Crescendo has formed a core group within Cisco, called Workgroup Business Unit.
 - The acquisition was accounted for as a pooling of interests.

Investment

In February 1995, Cisco purchased a preferred stock equity interest in NETSYS Technologies, Inc. based in Palo Alto (CA). Formed in April 1991, NETSYS develops and markets software tools for automated, real-time network problem solving and planning for local and wide-area networks.

Employees

As of September 25, 1994, Cisco had 2,443 employees segmented as follows:

Domestic marketing and sales.....	714
Customer support.....	250
Engineering	566
Manufacturing.....	290
Finance and administration	275
Total U.S. employees.....	2,095
International employees	348
	2,443

Key Products and Services

Cisco's internetworking products connect and manage communications among local and wide-area networks that employ a variety of protocols and media interfaces.

Routers

Cisco's high-end routers include:

- Cisco AGS+—A high-end router
- Cisco 7000/7010—The Cisco 7000 family of internetworking platforms includes two models—the Cisco 7000 and Cisco 7010.
 - In 1993, Cisco started shipping its first Cisco 7000 family of routers for use in ATM networks. Cisco 7000/7010 are targeted at customers requiring high performance and applications availability.
 - These routers provide performance of up to 250,000 packets per second. Cisco also has an ATM Interface Processor (AIP) for the Cisco 7000 router family. This interface card is capable of rates up to 155 Mbps and allows high speed communication between the Cisco 7000 and 7010 routers and the ATM switches.
 - This family of routers appeal to telecommunications companies, brokerage firms, banks, large manufacturing

companies and other organizations that require multiple highly reliable internetwork connections.

Cisco's access router family includes:

- Cisco 4000—A modular router that is designed to meet the needs of large offices and regional sites
- Cisco 3000—A fixed-configuration platform that provides full-featured service
- Cisco 2509-2512—Remote LAN access devices (routers) for the dial-up market
- Cisco 2500—A platform that is customized to meet the needs of small branch offices
- Cisco 500-CS—An asynchronous dial-up router that provides mobile and home users full access to corporate LAN applications and resources
- Cisco AS5100—Remote LAN access server with integrated modems for the central site location.

IBM Connectivity

Cisco offers a suite of IBM internetworking capabilities such as Token Ring router interfaces; SDLC encapsulation of SNA data; local termination of Token Ring sessions; LAN Network Manager support; mixed-media bridging, translation and conversion; multiple prioritization schemes and other features.

Network Management

Cisco's internetwork management offerings include:

- Cisco Internetwork Operating System™ (IOS)—A framework that provides a single, integrated platform for all network users and applications

- **Cisco Configuration Builder**—A software application that allows network managers to synchronize configurations of multiple routers
- **CiscoWorks™**—A series of SNMP-based productivity applications that allow users at a central site to manage their Cisco routers from one integrated platform. It consists of two components—The Operating Series and The Management Series.
- **Workgroup Director™**—An SNMP-based network management software tool that allows users to manage a cluster of hubs from the same console

Workgroup Products

Cisco offers LAN workgroup connectivity products through its Workgroup Business Unit. Products include:

- ProStack/Ethernet switch from Kalpana
- Catalyst™ workgroup switch
- Copper Distributed Data Interface (CDDI)/Fiber Distributed Data Interface (FDDI) workgroup concentrators
- CDDI/FDDI workgroup adapters
- Workgroup Director—A software management tool that monitors workgroup products that include CDDI/FDDI concentrators, LAN switching platforms and adapters

The company announced its new networking architecture which will be used to provide LAN switches and virtual LANs as ATM solutions. The CiscoFusion architecture is inherent in the company's ATM router interface and ATM switch.

Cisco Systems also offers a Hyperswitch A100, which is a workgroup ATM switch that supports 16 ATM ports. Each port operates at rates of up to 155 Mbps. In addition, the company has an enterprise level ATM switch—LightStream 2020.

Some of the interfaces currently supported by the AIP on the ATM switch include: SONET SDH 155 Mb multi mode fiber; SONET SDH single mode fiber; DS3 over coaxial cable; E3 over coaxial cable; TAXI 100 Mb multimode fiber; STS3 and TMI over UTP category 5 and STS1 over UTP category 3.

Support Services

Cisco offers a range of support programs that provide pre-and post-sale consulting, one-on-one training and technical support. The company provides customer support and service through its Technical Assistance Centers, located in California, North Carolina and Belgium.

In addition, Cisco provides technical support to its customers worldwide, via its service partnerships with third-party providers. The company offers on-site hardware maintenance through IBM, NCR Corporation and Hewlett-Packard, worldwide.

Marketing and Sales

In the U.S., Cisco markets its products mainly through its direct sales force and resellers. The domestic direct sales staff is made up of approximately 525 employees based in about 90 field offices in Atlanta, Boston, Chicago, Cincinnati, Cleveland, Columbia, Dallas, Denver, Durham, Honolulu, Houston, Los Angeles, Miami, New York, Orlando, Phoenix, Pittsburgh, Portland, Princeton, Salt Lake City, San Diego, San Francisco, San Jose, Seattle, St. Louis and Washington, D.C.

In the international marketplace, Cisco sells its products through distributors, value-added resellers (VARs), original equipment manufacturers (OEMs), resellers and direct sales forces of its subsidiaries. The company has approximately 74 distributors in Africa, Asia, Australia, Canada, Central and South America, Europe, Japan and the Middle East.

Subsidiaries that provide sales support are located in Australia, Austria, Belgium, Canada, France, Germany, Hong Kong, Italy, Japan, Mexico, New Zealand and the U.K.

In addition, Cisco has several partnerships with service providers, switch vendors, hub providers as well as systems integrators.

Alliances

Significant alliances formed by Cisco include the following:

- In 1994, Cisco agreed with LanOptics Ltd., to jointly develop integrated routing and hub functionality.
- In 1994, Cisco signed an agreement with Alcatel, whereby Alcatel will integrate Cisco technology into its products and will offer Cisco's products as its preferred partner for router equipment.
- Cisco entered into an agreement with Chipcom that will allow Chipcom to integrate Cisco's IOS technology into Chipcom's products.
- Cisco agreed to allow Microsoft to integrate Cisco's PC-based router cards with Microsoft Windows NT Advanced Servers.
- Cisco has an agreement with Cascade Communications that allows the companies to jointly develop a multiservice wide-area network solution.

- Cisco has an agreement to provide internetworking and routing components for Cabletron's hubs.

Competition

Cisco's major competitors include Bay Networks (merged company of Wellfleet and Synoptics), 3Com and Proteon.

In addition, the company also competes to a lesser extent with systems vendors such as IBM and DEC.

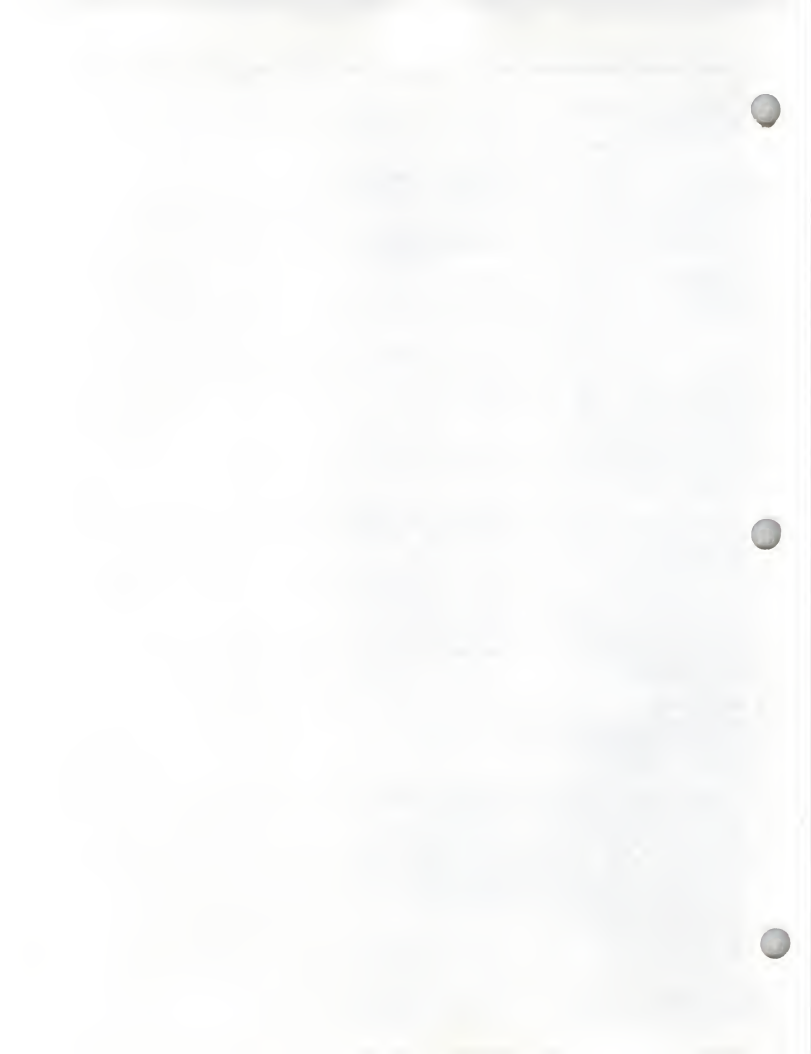
INPUT Assessment

Cisco's major strengths include:

- Broad range of networking products
- High customer acceptance
- High growth rate, year-over-year
- Acceptance and use of Cisco IOS by other vendors as the de facto routing standard

Challenges for the company over the coming years include:

- Being able to sustain the growth the company has experienced over recent years
- Enhancing existing products and introducing new products



COMPANY HIGHLIGHT

CISINETWORK CORPORATION

16625 Saticoy Street
Van Nuys, CA 91406
(213) 781-8221

Bill Barancik, President
Subsidiary of The CISI Group
Total Employees: 270
Total Revenue, Fiscal Year End 4/30/83:
\$23,000,000*

THE COMPANY

- CISInetwork Corporation, formed as a Delaware corporation in March 1979, is a subsidiary of The Compagnie International de Services en Informatique (CISI) Group, a French computer services company. The company provides processing and professional services to a variety of industries.
- CISInetwork was formed as a vehicle for The CISI Group's entrance into the U.S. computer services market. This formation was initiated by the acquisition in March 1979 of Proprietary Computer Systems, Inc. (PCS) of Van Nuys (CA). In May 1981 CISInetwork also acquired UNI-COLL Corporation of Philadelphia.
- PCS and UNI-COLL will continue to operate under their original names until January 1, 1984, when they will be merged into CISInetwork Corporation.
 - PCS, founded in 1970, offers remote computing services using the APL language. Fiscal year end April 1982 revenue reached an estimated \$12 million. As of April 1983 PCS employed approximately 150 people.
 - UNI-COLL offers remote computing and batch processing, data base maintenance, and professional services to educational, nonprofit, and commercial users. Fiscal year end April 1982 revenue reached about \$9.4 million. As of April 1983 UNI-COLL employed approximately 120 people.
- On March 16, 1983 The CISI Group acquired Wharton Econometric Forecasting Associates from Ziff-Davis Publishing Company. As a result of the acquisition Wharton now operates as a subsidiary of The CISI Group and is an affiliate of CISInetwork.
 - Wharton, with approximately 140 employees as of December 1982, offers on-line access to short- and long-range models of the U.S. and world economies and forecasts trends.

*INPUT estimate

CISINetwork CORPORATION

- CISInetwork markets its processing services through six strategic business units, as follows:
 - Timesharing Services.
 - Utility Services.
 - Financial Systems.
 - Professional Services.
 - Real Estate Systems.
 - Database Econometric Systems.
- Major competitors include STSC, Inc., I.P. Sharp, and Boeing Computer Services. Other competition comes from Tymshare and General Electric Information Services Company.

KEY PRODUCTS AND SERVICES

- CISInetwork derives most of its revenue from processing services and a growing percent from professional services. Processing services modes of delivery include interactive, remote batch, batch, and inquiry/response. Distributed data processing via microcomputers is also available. A profile of the company's network services is shown in the exhibit.
- CISInetwork offers several financial network applications for use by banking institutions and financial analysts.
 - TAFS^{T.M.} (Trust Account Fee System) offers basic personal trust accounting where fees and profits are closely monitored and controlled.
 - STIMS^{T.M.} (Short Term Investment Management System) provides hourly and daily account management of a wide variety of short-term investment instruments.
 - BANKMODEL^{T.M.} analyzes, manipulates, and projects balance sheet data.
 - CTAMS^{T.M.} (Corporate Trust Accounting and Management System) provides record keeping for corporate trusts.
 - INPACS^{T.M.} (Institutional Participant Accounting and Control System) captures and controls participant activities in short-term money market funds.
 - IAS-PLUS^{T.M.} (Investment Accounting System) handles large portfolios and mutual funds.
 - Asset/Liability Model is for use by banks.
 - A series of financial management systems designed by Price Waterhouse Company is offered jointly by CISInetwork and Price Waterhouse. These include corporate tax accounting systems and various systems for financial modeling customized for specific industries.

CISINETWORK PROFILE

APPLICATION AREA/PRODUCT NAME	APPLICATION AREA/PRODUCT NAME
<ul style="list-style-type: none"> ● OPERATING ENVIRONMENT <ul style="list-style-type: none"> — AMDAHL V/7B, VM/CMC — IBM 3031, MVS — IBM 3081, MVS ● PROGRAMMING LANGUAGES <ul style="list-style-type: none"> — ALGOL W — PASCAL/VS — APLSV — PROMACS — ASSEMBLER XF — RPG — VS COBOL — SNOBOL — VS FORTRAN — WATBOL — FORTRAN G1 — WATFIV — FORTRAN H-EXTENDED — PL/1 — PL/C ● DATA MANAGEMENT SOFTWARE <ul style="list-style-type: none"> — ARISTOTAL — INFO — ADABAS — MARK IV — CICS/VS — PAL/DBM — DBM — PANVALET ● BANKING AND FINANCE <ul style="list-style-type: none"> — TAFS — CTAMS — STIMS — INPACS — BANKMODEL — IAS-PLUS — ASSET/LIABILITY — VARIOUS FINANCIAL MANAGEMENT SYSTEMS ● REAL ESTATE <ul style="list-style-type: none"> — CASHCOM — ESCROW ACCOUNTING SYSTEM — LENDER-PARTNER SYSTEM — NOTECOMP — THORMAN MODEL ● SCIENTIFIC AND ENGINEERING <ul style="list-style-type: none"> — CIRCUIT ANALYSIS (CORNAP, PANE, PCAP) — CIVIL ENGINEERING (ICES, PSDI/STRUDL) — UTPS (URBAN TRANSPORTATION) — PROJECT/2 	<ul style="list-style-type: none"> ● NUMERICAL METHODS <ul style="list-style-type: none"> — APPLIED MATHEMATICS (EISPACK, FOURT, IMSL LIBRARY, PERMLIB) — STATISTICS (ACOVSM, APL STATISTICAL LIBRARY, BMDP, OSIRIS III, SAS79.5, SPSS, STATLIB, STAT PACK 2, CASES, C-TAB, CLUSTERING AND SCALING, F4STAT, JOHNSN, LINMAP, LISREL, MDSCALE, MIAMI, MULTIQUAL, MULTI-VARIANCE, NTSYS, PROLIB, SIBYL/RUNNER, SIR, SOUPAC, TORSQA, TPL) ● MATHEMATICAL PROGRAMMING AND SIMULATION <ul style="list-style-type: none"> — NONLINEAR PROGRAMMING (COMET) — LINEAR PROGRAMMING (INTEGER, JOBSCH, LINPROG, LQ PROG, MFOR/360, MPSX, QP, ZERO ONE, QPF4) — SIMULATION (CSMP, DYNAMO II, GASP II AND IV, GPSS V, SAAM 25, SIMSCRIPT 11.5) ● GRAPHICS <ul style="list-style-type: none"> — SAS/GRAPH — SPLOT/WPLOT — APL GRAPH II — SYMAP/SYMVU — CSMP/PLOT — TEL-A-GRAF — HISTT/WHIST — THREED — PLOT I — VISAD — PLOT-10 — PLOTLIB — PREVIEW — FORTRAN GRAPHICS LIBRARIES ● ECONOMETRIC AND DATA BASE SERVICES <ul style="list-style-type: none"> — CITISIM — CRONOS — CITIBASE — COMEXT — VARIOUS ENERGY DATA BASES — WHARTON ECONOMETRIC ● OTHER <ul style="list-style-type: none"> — REPORT — CISIMAIL — TEXT — GUARD — PHOTOCOMP — ACCUTROL — RISK — SRJE — PERT

- A series of applications for the real estate industry are available, including:
 - NOTECOMP^{T.M.}, a management accounting and reporting system for resort timesharing, right-to-use, contract and escrow collection, and land sale programs.
 - Thorman Model, which models cash flow in shared ownership resort projects.
 - CASHCOM, which models cash flow in commercial development projects.
 - Lender-Partner System, a management accounting system for projects in which the lender has an equity position.
 - Escrow Accounting System, which provides management accounting for escrow companies.
- Econometric and data base services include:
 - CitiSim, an on-line macroeconomic modeling system developed by the Citibank economics department.
 - A series of economic data bases including CITIBASE, CRONOS, and COMEXT.
 - Various energy data bases involving energy exploration, production, and consumption.
 - Plans to make Wharton Econometric's economic forecast data available to CISInetwork clients.
- Other applications available from CISInetwork include:
 - INFO^{T.M.}, an on-line data base management system.
 - REPORT, a management report-writing system.
 - DBM, a data base manager for manipulation of large data bases.
 - TEXT^{T.M.} and CISCRIP^{T.M.}, on-line text processing services.
 - ARISTOTAL^{T.M.}, an information management system that permits manipulation of textual materials and combinations of text, tabular, and numeric information.
 - PHOTOCOMP^{T.M.}, which prepares TEXT-processed documents for automatic photocomposition.
 - CISImail^{T.M.}, an electronic mail system.

CISINETWORK CORPORATION

- RISK, for scheduling and controlling activities under conditions of uncertainty.
- PERT, an interactive system for analyzing and scheduling complex projects.
- TEL-A-GRAF and SAS/GRAPH, interactive computer graphics systems.
- Batch processing services include industry-specific applications for educational institutions, municipal governments, and processing for Wharton Econometric Forecasting Associates.
- In 1982 CISInetwork began offering a hand-held terminal system for quality control in manufacturing.
 - Data is entered into the device during inspection of assembly line activity. At the end of the day the data is transferred from the terminal to CISInetwork's computer center for processing. Reports are delivered to the client the following day.
 - This system is currently being used by International Telephone and Telegraph.
- Professional services offered by CISInetwork include consulting for systems evaluation, design, implementation, data base design, and programming.

INDUSTRY MARKETS

- CISInetwork's fiscal 1983 revenue was derived from the following industries, listed in order of contribution to revenue: banking and finance, education, real estate, state and local government, federal government, manufacturing, and transportation.

GEOGRAPHIC MARKETS

- CISInetwork's revenue is derived from the U.S., primarily California, Pennsylvania, and Texas.
- Branch offices are located in Boston, Chicago, Costa Mesa (CA), Denver, Houston, Los Angeles, New York City, Philadelphia, Phoenix, San Francisco, Sunnyvale (CA), and Washington, D.C.

COMPUTER HARDWARE AND SOFTWARE

- CISInetwork operates two data centers, equipped as follows:
 - Van Nuys (CA).
 - 1 Amdahl V/7B, VM/CMS.
 - 1 IBM 3031, MVS.
 - Philadelphia.
 - 1 IBM 3081, MVS.
- Clients can access CISInetwork's data centers via leased lines or Tymnet. The network is also linked to The CISI Group's international network.

COMPANY PROFILE

CITICORP INFORMATION RESOURCES

Twelfth Floor
Four Stamford Forum
Stamford, CT 06901
(203) 351-4900

Frank R. Martire, Chairman and CEO
Subsidiary of Citicorp
Total Employees: 1,000
Total Revenue, Fiscal Year End
12/31/89: \$104,000,000

The Company

Citicorp Information Resources (CIR) provides processing services, application software products, systems operations (facilities management), and associated support services to banks, thrifts (savings and loans, savings institutions, and mutual savings banks), and credit unions.

- CIR was incorporated in 1979 with a charter to provide financial institutions with a range of information services.
- Operating as a subsidiary of Citicorp, CIR derives the majority of its revenue from noncaptive sources. During 1989, CIR took over management responsibilities for Citicorp's internal payroll, human resource, and benefits processing activities.

CIR's 1989 revenue reached an estimated \$104 million.

- In 1989, CIR exceed its plan for new sales contract value by 30% and the company's client attrition rate was less than 1%.
- From 1984 through 1987, CIR generated approximately \$100 million a year in revenues. The lack of growth was attributed in part to consolidation in the banking industry.
- During 1986, CIR implemented a strategy to reposition its product and service offerings to the financial services marketplace as follows:
 - Offer one national service bureau product to banks and thrifts
 - Offer one national service bureau product to credit unions and use the same software for both service bureau and in-house credit union clients
 - Introduce an in-house system for banks and thrifts

- From 1986 through 1989, CIR invested \$45 million in redefining target markets, acquiring new products to fill strategic product gaps, and implementing its national product offerings.
- In January 1989, CIR completed the conversion of all of its Arlington Heights on-line services bank clients to CIR's National Service Product, marking the culmination of a four-year effort to convert all of its bank data processing clients to a single software system.
- CIR management attributes the company's growth to its repositioning in the marketplace, increased licensing of its software products for in-house use, and the introduction of the Resource Manager service.
- The company anticipates that 1990 revenue will reach \$120 million.

CIR's competition come from both regional and national companies.

- National competitors include Electronic Data Systems, Automatic Data Processing, ITI/Unisys, Systematics, Control Data Corporation, Newtrend Group, Ultradata, Summit Software, World Computer, Kirchman, Broadway & Seymour, Flserv, and First Financial Management Corporation.
- Regional competitors include Mellon, M&I Data Services, and Symitar.

Key Products and Services

Approximately 61% of CIR's 1989 revenue was derived from processing services, 21% from systems operations, 12% from application software products, and 6% from consulting professional services.

CIR is a national supplier of information services for over 800 financial institutions in 43 states and in 24 countries around the world. CIR provides the following products and services to financial institutions:

- The National Service Product is an on-line processing service for banks and thrifts.
- Resource Manager is a systems operations processing service that provides access to third-party software from a CIR data center.

- The Comprehensive Banking System is available as a software product or turnkey system to banks and thrifts.
- Facilities management (systems operations) professional services are provided to banks and thrifts.
- The GALAXY 2000 Credit Union System is available as an on-line processing service, in-house software product, or systems operation professional service. Because GALAXY 2000 is vertically integrated software, all three delivery modes use the same software.
- EFT Services support a range of ATM transaction processing capabilities, including ATM driving, transaction switching, and point-of-sale support.
- CIR also provides consulting services to financial institutions.

The National Service Product (NSP) is CIR's integrated multi-branch, multi-organizational on-line servicing system for banks and thrifts. NSP software was originally licensed from Florida Software Services of Orlando (FL) in 1984, and has been customized by CIR to meet the needs of its customers.

- NSP is currently processed out of the CIR data center in Arlington Heights (IL).
- NSP banking applications include:
 - Regular Passbook, Statement, and Club Accounts
 - Certificates
 - Demand Deposit Accounts
 - Commercial Loans
 - Installment Loans
 - Customer Profitability Analysis
 - Central Information File
 - Mortgage Loan, Secondary Market Processing
 - Retirement Accounts
 - Account Reconciliation
 - Proof of Deposit
 - General Ledger
 - ATM Processing
 - Equity Loan
 - Branch Automation
 - Audio Response
- NSP thrift processing applications include:

- Regular Passbook and Statement Accounts
 - Certificates
 - NOW Accounts
 - Retirement Accounts
 - Adjustable Mortgage Instrument Processing
 - Consumer Loans
 - Line of Credit Accounts
 - Construction Lending
 - Mortgage Loans
 - Customer Information Management System
 - On-line History
 - Teller Cash Management
 - Automatic Transfer System
 - ATMs
 - Statement Processing
 - Secondary Mortgage Markets
 - Federal Recurring Payments
 - Automated Tax Disbursements
 - Equity Loans
 - Interfaced General Ledger
 - Branch Automation
 - Audio Response
- CIR currently has over 150 NSP clients.
 - Enhancements introduced to NSP during 1989 include Selector (for PC downloading), MCIF (marketing customer information file), and Client Disaster Recovery (for automated disaster recovery planning).

The Resource Manager service, introduced in 1988, provides clients with access to third-party software operated in CIR data centers.

- Resource Manager is targeted to institutions with \$1 billion or more in assets. It allows them the reduced expense and risk of having their data processed by CIR personnel on dedicated CIR mainframes, while having software programmed to their own particular operating needs.
- CIR has licensed Computer Associates International, Inc.'s CA-INFOPOINT Banking Series line of integrated banking application software for its Resource Manager service.
- CIR offers the Resource Manager service to institutions operating Florida Software's products or other proprietary software.

- The Talman Home Federal Savings and Loan Association of Illinois, which developed the Resource Manager concept with CIR, was CIR's first Resource Manager customer. There are currently three Resource Manager clients.

CIR's Facilities Management (systems operations) services are provided to approximately 14 clients. CIR provides management, operating, and maintenance personnel for financial institutions' data centers, generally under five-year contracts.

In April 1989, CIR introduced EFT Services, an integrated ATM service available from the Arlington Heights data center. ATM processing support was previously provided to CIR's NSP clients by GTE-Indianapolis and Deluxe Data Services.

- CIR has licensed two Tandem-based EFT products from Applied Communications, Inc. (BASE24-atm and BASE24-pos) to serve as the baseline software for this service.
- EFT Services is available to NSP and GALAXY 2000 clients and as a Resource Manager service.

CIR's Comprehensive Banking System (CBS) is available to banks and thrifts as a software product for in-house use or as a turnkey system. The turnkey product is targeted to banks and thrifts with \$50 million to \$3 billion in assets.

- CBS was originally designed for the IBM System/38. During 1988, CBS software was released in native mode for IBM's AS/400 computer system.
- CBS applications/subsystems include the following:
 - Customer Information File and Customer Profitability Analysis subsystems track and correlate all of a customer's relationships with the banking institution.
 - General Ledger subsystem is an integrated accounting and financial control system.
 - Proof of Deposit subsystem is the central point of distribution and control for all monetary transaction flows.
 - Loan subsystem combines the automated processing of real-estate, commercial, and consumer lending operations.

- Transaction subsystem processes all transaction-based deposit products, including checking, regular savings, club, NOW, money market, and HIFI accounts.
- Time subsystem is for all investment or term-deposit accounts, including certificates of deposit (CDs), time deposit open accounts (TDOAs), IRAs, SEPs, Keoghs, and repurchase agreements.
- Additional functions include electronic funds transfer, ATM support, teller system support, and Service Link.
- There are currently over 120 clients using CBS worldwide.
- In January 1989, the largest purchase to date of CBS software and networked IBM AS/400 hardware for a single private network was made by HFC plc in the U.K.
- The network is using 190 IBM AS/400s and 2,000 IBM PS2 Model 50z microcomputers.
- HFC agreements with CIR and IBM represent a purchase in excess of \$20 million. CIR's portion of the contract for CBS software licenses is estimated at about \$7 million. Under the terms of the agreement, CIR will provide maintenance of the software, support, and development assistance for five years.

CIR's GALAXY 2000 Credit Union System is a Data General-based system available as an on-line remote computing service, an in-house software product, or a systems operation (facilities management) service. Because GALAXY 2000 is a vertically integrated software product, all three delivery modes use the same software.

- In October 1988, culminating a four-year development project and the investment of more than \$18 million, CIR announced the completion of a nationwide telecommunications network and a central "mega" data processing center through which it now services more than 400 credit unions.
- The data center, located in Troy (MI), is equipped with eight Data General MV/20000 Series computers and is backed up by its own "hot-site" disaster recovery center.
- Features include on-line posting and updating of accounts and loans, on-line history, account status, production of member documents, and activity and audit reporting. Optional software enhancements include audio response facilities that allow

members to perform transactions and make inquiries regarding their accounts.

- GALAXY 2000 applications include:
 - Member Share and Loan Processing
 - Share Draft Processing
 - Certificate of Deposit Processing
 - General Ledger
 - Electronic Funds Transfer
 - Real Estate Mortgage Loan
 - ATM
 - Audio Response
- In October 1988, CIR began marketing CUPLAN (from Robert Eldridge and Associates) as an optional part of the GALAXY 2000 system. CUPLAN allows users to download required information from the GALAXY 2000 General Ledger to the credit union's microcomputer for forecasting and investment tracking applications.
- In October 1988, CIR began marketing the Electronic Check Processing System (from The Hedman Company) as an option to the GALAXY 2000 system.
- Hardware for in-house GALAXY 2000 systems is sold to clients through a joint marketing agreement between CIR and Data General.
- GALAXY 2000 is currently installed as an in-house system for 80 clients and is provided as a processing service to 320 clients.

CIR's Citifile payroll tax filing service processes the payment and filing of corporate payroll taxes on the federal, state, and local levels.

- The Citifile service, introduced in 1970, was previously offered through Citibank. The service has been available through CIR since early 1990.
- Features include submitting tax payments and deposits, reconciling payments with tax liabilities, and assuming all penalty liability for timely filing.
- The service is targeted to U.S. companies with over 500 employees. There are currently 142 Citifile clients.

Through Personnel Services & Technology (PS&T), CIR also provides payroll, human resource, and benefits processing to over 50 Citicorp companies.

- Headquartered in Melville (NY), PS&T formerly operated as a separate Citibank business. During 1989, CIR took over the management of PS&T's operations.
- PS&T retains information on over 80,000 Citibank employees worldwide. Processing support is provided for paychecks/direct deposits, benefits inquiries, 401(K) plan processing, stock option/purchase plan management, and human resource reporting.
- The operations of PS&T contributed approximately 12% to CIR's 1989 revenue.

Consulting services are provided by CIR to financial institutions in the following areas: diagnostics, strategic planning, financial management, data processing, human resources, training center development, process engineering and rationalization, and corporate banking.

Industry Markets

One hundred percent of CIR's 1989 revenue was derived from the financial services industry. A further breakdown of revenue is as follows:

Banks	65%
Thrifts	15%
Credit Unions	20%
	100%

Geographic Markets

Approximately 90% of CIR's 1989 revenue was derived from the U.S. and 10% from international sources.

CIR's main sales offices are located in Stamford (CT), San Diego (CA), Arlington Heights (IL), Troy (MI), and Orlando (FL). Local sales office are located throughout the U.S.

**Computer
Hardware and
Software**

CIR currently operates 12 data centers located in Arlington Heights and Matteson (IL); Boston (MA); Bay City, Troy, and Lansing (MI); Amarillo (TX); Hammond (LA); Scotts Valley (CA); Melville (NY); Honolulu (HI); and Owensboro (KY). These centers generally have high-end mainframes installed, including:

- IBM 4341s, MVS
- IBM 3033s, DOS/USC and OS/MVS
- IBM 3031s, OS/VS1
- IBM 3083s, OS/MVS
- IBM 3090s
- Data General MV 20000, AOS/VS
- Tandem NonStops, GUARDIAN

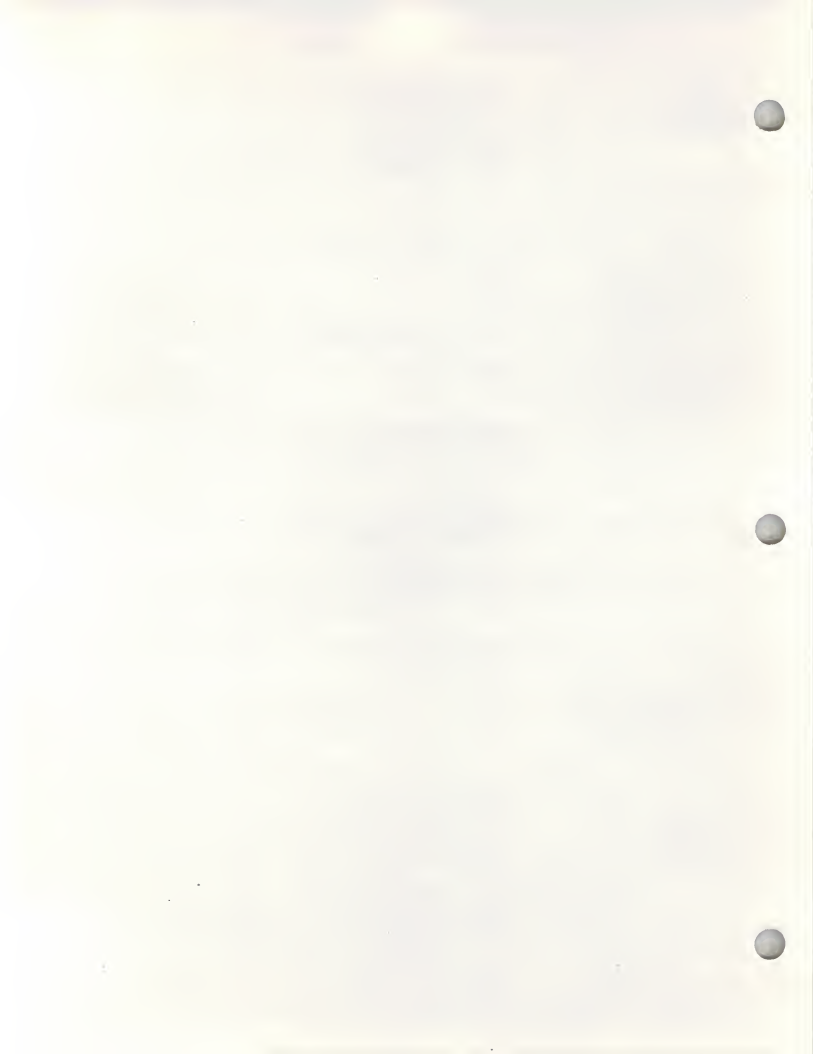
The Arlington Heights data center provides service for the National Service Product.

- The Arlington Heights data center now services a cumulative total of 1.8 million accounts for its clients. The accounts are serviced through 3,000 teller terminals and ATMs, which process 500,000 transactions per day.

The Troy data center supports all on-line GALAXY 2000 Credit Union System processing clients.

Nine data centers--Amarillo, Hammond, Scotts Valley, Lansing, Bay City, Matteson, Owensboro, Honolulu, and Boston--provide systems operations (facilities management) processing services.

Research and Development Centers are located in San Diego (CA) and Orlando (FL).



COMPANY PROFILE

CITICORP INFORMATION RESOURCES

Twelfth Floor
Four Stamford Forum
Stamford, CT 06901
(203) 351-4900

Pablo Gonzalez, Chairman
Subsidiary of Citicorp
Total Employees: 1,256
Total Revenue, Fiscal Year End
12/31/88: \$104,000,000

The Company

Citicorp Information Resources (CIR) provides processing services, application software products, systems operations (facilities management), and associated support services to over 1,000 banks, thrifts (savings and loans, savings institutions, and mutual savings banks), and credit unions.

- CIR was incorporated in 1979 with a charter to provide financial institutions with a range of information services.
- Operating as a subsidiary of Citicorp, CIR derives its revenue entirely from noncaptive sources.

CIR's 1988 revenue reached an estimated \$104 million (which was the net effect of restructuring), a 4% increase over estimated 1987 revenue of \$100 million. Actual gross revenue increased 14% in 1988.

- From 1984 through 1987, CIR generated approximately \$100 million a year in revenues. The lack of growth was attributed in part to consolidation in the banking industry.
- In January 1989, CIR completed the conversion of all of its Arlington Heights on-line services bank clients to CIR's National Service Product, marking the culmination of a four-year effort to convert all of its bank data processing clients to a single software system.
- During 1986, CIR implemented a strategy to reposition its product and service offerings to the financial services marketplace as follows:
 - Offer one national service bureau product to banks and thrifts

- Offer one national service bureau product to credit unions and use the same software for both service bureau and in-house credit union clients
- Introduce an in-house system for banks and thrifts
- CIR management attributes revenue growth in 1988 to its repositioning in the marketplace, increased licensing of its software products for in-house use, and the introduction of the Resource Manager service.
- During the year, 252 client installations of the National Service Product (bank and thrift service bureau), GALAXY 2000 Credit Union System (in-house and on-line), and Comprehensive Banking System (bank and thrift in-house) were completed.
- New client contracts exceeded \$45 million during 1988 and existing clients signed over \$168 million in multi-year contracts for CIR's National Service Product and GALAXY 2000 products and services.
- CIR management anticipates 1989 revenue will exceed \$105 million, which represents an 18% growth in targeted new products and services markets.

CIR's competitors come from both regional and national companies.

- National competitors include Electronic Data Systems, Automatic Data Processing, ITI/Unisys, Systematics, Control Data Corporation, Newtrent Group, Ultradata, Summit Software, World Computer, Kirchman, Horizon, Broadway & Seymour, FIServ, and First Financial Management Corporation.
- Regional competitors include Mellon, M&I Data Services, and Symitar.

Key Products and Services

Approximately 64% of CIR's 1988 revenue was derived from processing services, 18% from systems operations, 12% from application software products, and 6% from consulting professional services.

CIR is a national supplier of information services for over 1,000 financial institutions in 43 states and in 22 countries around the world. CIR provides the following products and services to financial institutions:

- The National Service Product is an on-line processing service for banks and thrifts.
- Resource Manager is a systems operations processing service that provides access to third-party software from a CIR data center.
- The Comprehensive Banking System is available as a software product or turnkey system to banks and thrifts.
- Facilities management (systems operations) professional services are provided to banks and thrifts.
- The GALAXY 2000 Credit Union System is available as an on-line processing service, in-house software product, or systems operation professional service. Because GALAXY 2000 is vertically integrated software, all three delivery modes use the same software.
- EFT Services support a range of ATM transaction processing capabilities, including ATM driving, transaction switching, and point-of-sale support.
- CIR also provides consulting services to financial institutions.

The National Service Product (NSP) is CIR's integrated multi-branch, multi-organizational on-line servicing system for banks and thrifts. NSP software was originally licensed from Florida Software Services of Orlando (FL) in 1984, and has been customized by CIR to meet the needs of its customers.

- NSP is currently processed out of CIR data centers in Woburn (MA) and Arlington Heights (IL).
- NSP banking applications include:
 - Regular Passbook, Statement, and Club Accounts
 - Certificates
 - Demand Deposit Accounts
 - Commercial Loans
 - Installment Loans
 - Customer Profitability Analysis
 - Central Information File

- Mortgage Loan, Secondary Market Processing
 - Retirement Accounts
 - Account Reconciliation
 - Proof of Deposit
 - General Ledger
 - ATM Processing
 - Equity Loan
 - Branch Automation
 - Audio Response
- NSP thrift processing applications include:
 - Regular Passbook and Statement Accounts
 - Certificates
 - NOW Accounts
 - Retirement Accounts
 - Adjustable Mortgage Instrument Processing
 - Consumer Loans
 - Line of Credit Accounts
 - Construction Lending
 - Mortgage Loans
 - Customer Information Management System
 - On-line History
 - Teller Cash Management
 - Automatic Transfer System
 - ATMs
 - Statement Processing
 - Secondary Mortgage Markets
 - Federal Recurring Payments
 - Automated Tax Disbursements
 - Equity Loans
 - Interfaced General Ledger
 - Branch Automation
 - Audio Response
 - CIR currently has over 150 NSP clients.
 - In May 1989, CIR introduced Selector, a software package that permits NSP customers to retrieve data from mainframe files resident at the CIR data center for manipulation on their microcomputers. Selector is available only to NSP clients.

The Resource Manager service, introduced during 1988, provides clients with access to third-party software operated in CIR data centers.

- Resource Manager is targeted to institutions with \$1 billion or more in assets. It allows them the reduced expense and risk of

having their data processed by CIR personnel on dedicated CIR mainframes, while having software programmed to their own particular operating needs.

- CIR has licensed Computer Associates International, Inc.'s CA-INFOPOINT Banking Series line of integrated banking application software for its Resource Manager service.
- CIR offers the Resource Manager service to institutions operating Florida Software's products and other proprietary software.
- The Talman Home Federal Savings and Loan Association of Illinois, which developed the Resource Manager concept with CIR, was CIR's first Resource Manager customer. There are currently two Resource Manager clients.

In April 1989, CIR introduced EFT Services, an integrated ATM service available from the Arlington Heights data center. ATM processing support was previously provided to CIR's NSP clients by GTE-Indianapolis and Deluxe Data Services.

- CIR has licensed two Tandem-based EFT products from Applied Communications, Inc. (BASE24-atm and BASE24-pos) to serve as the baseline software for this service.
- EFT Services is available to NSP and GALAXY 2000 clients and as a Resource Manager service.
- By July 1989, CIR had completed the installation of its first group of clients onto EFT Services. In June, nearly a half million transactions were processed, with projections to grow to over one million by August and over two million by the end of 1989.

CIR's Comprehensive Banking System (CBS) is available to banks and thrifts as a software product for in-house use or as a turnkey system. The turnkey product is targeted to banks and thrifts with \$50 million to \$3 billion in assets.

- CBS was originally designed for the IBM System/38. During 1988, CBS software was released in native mode for IBM's AS/400 computer system.
- CBS applications/subsystems include the following:

- Customer Information File and Customer Profitability Analysis subsystems track and correlate all of a customer's relationships with the banking institution.
- General Ledger subsystem is an integrated accounting and financial control system.
- Proof of Deposit subsystem is the central point of distribution and control for all monetary transaction flows.
- Loan subsystem combines the automated processing of real-estate, commercial, and consumer lending operations.
- Transaction subsystem processes all transaction-based deposit products, including checking, regular savings, club, NOW, money market, and HIFI accounts.
- Time subsystem is for all investment or term-deposit accounts, including certificates of deposit (CDs), time deposit open accounts (TDOAs), IRAs, SEPs, Keoghs, and repurchase agreements.
- Additional functions include electronic funds transfer, ATM support, teller system support, and Service Link.
- There are currently over 100 clients using CBS worldwide.
- In January 1989, the largest purchase to date of CBS software and networked IBM AS/400 hardware for a single private network was made by HFC plc in the U.K.
 - The network will use 190 IBM AS/400s and 1,500 IBM PS2 Model 50z microcomputers.
 - HFC agreements with CIR and IBM represent a purchase in excess of \$20 million. CIR's portion of the contract for CBS software licenses is estimated at about \$7 million. Under the terms of the agreement, CIR will provide maintenance of the software, support, and development assistance for five years.

The Intelligent Banking System (IBS), introduced in 1988, uses artificial intelligence technology to process unstructured inbound telex messages for international trade services applications.

- The DEC MicroVAX-based IBS accepts unstructured Funds Transfer or Letter of Credit telex messages and returns fully processed, verified, structured SWIFT messages or other structured formats automatically.

- IBS can be integrated into several network architectures, including DECnet over an Ethernet local-area network.
- CIR has incorporated IBS into Western Union's worldwide messaging network in order to offer this service.
- IBS was also installed on telex carrier TRT's network during 1988.

CIR's GALAXY 2000 Credit Union System is a Data General-based system available as an on-line remote computing service, an in-house software product, or a systems operation professional service. Because GALAXY 2000 is a vertically integrated software product, all three delivery modes use the same software.

- In October 1988, culminating a four-year development project and the investment of more than \$18 million, CIR announced the completion of a nationwide telecommunications network and a central "mega" data processing center through which it now services more than 800 credit unions.
 - The data center, located in Troy (MI), is equipped with six Data General MV/20000 Series computers and is backed up by its own "hot-site" disaster recovery center.
- Features include on-line posting and updating of accounts and loans, on-line history, account status, production of member documents, and activity and audit reporting. Optional software enhancements include audio response facilities that allow members to perform transactions and make inquiries regarding their accounts.
- GALAXY 2000 applications include:
 - Member Share and Loan Processing
 - Share Draft Processing
 - Certificate of Deposit Processing
 - General Ledger
 - Electronic Funds Transfer
 - Real Estate Mortgage Loan
 - ATM
 - Audio Response
- In October 1988, CIR announced an agreement to market CUPLAN (from Robert Eldridge and Associates) as an optional part of the GALAXY 2000 system. CUPLAN allows users to download required information from the GALAXY

2000 General Ledger to the credit union's microcomputer for forecasting and investment tracking applications.

- In October 1988, CIR announced an agreement to market the Electronic Check Processing System (from The Hedman Company) as an option to the GALAXY 2000 system.
- Hardware for in-house GALAXY 2000 systems is sold to clients through a joint marketing agreement between CIR and Data General.
- GALAXY 2000 is currently installed as an in-house system for 80 clients and is provided as a processing service to 720 clients.

CIR also provides facilities management (systems operations) professional services to approximately 14 clients. CIR provides management, operating, and maintenance personnel for financial institutions, generally under five-year contracts.

Consulting services are provided by CIR to financial institutions in the following areas: diagnostics, strategic planning, financial management, data processing, human resources, training center development, process engineering and rationalization, and corporate banking.

Industry Markets

One hundred percent of CIR's 1988 revenue was derived from the financial services industry. A further breakdown of revenue is as follows:

Banks	65%
Thrifts	15%
Credit Unions	20%
	100%

Geographic Markets

Approximately 90% of CIR's 1988 revenue was derived from the U.S. and 10% from international sources.

CIR's main sales offices are located in Stamford (CT), San Diego (CA), Denver (CO), Arlington Heights (IL), Troy (MI), and Orlando (FL). Local sales office are located throughout the U.S.

**Computer
Hardware and
Software**

CIR currently operates 12 data centers located in Arlington Heights and Matteson (IL); Woburn (MA); Bay City, Troy, and Lansing (MI); Amarillo (TX); Hammond (LA); Scotts Valley (CA); Melville (NY); Honolulu (HI); and Owensboro (KY). These centers generally have high-end mainframes installed, including:

- IBM 4341s, MVS
- IBM 3033s, DOS/USC and OS/MVS
- IBM 3031s, OS/VS1
- IBM 3083s, OS/MVS
- IBM 3090s
- Data General MV 20000, AOS/VS
- Tandem NonStops, GUARDIAN

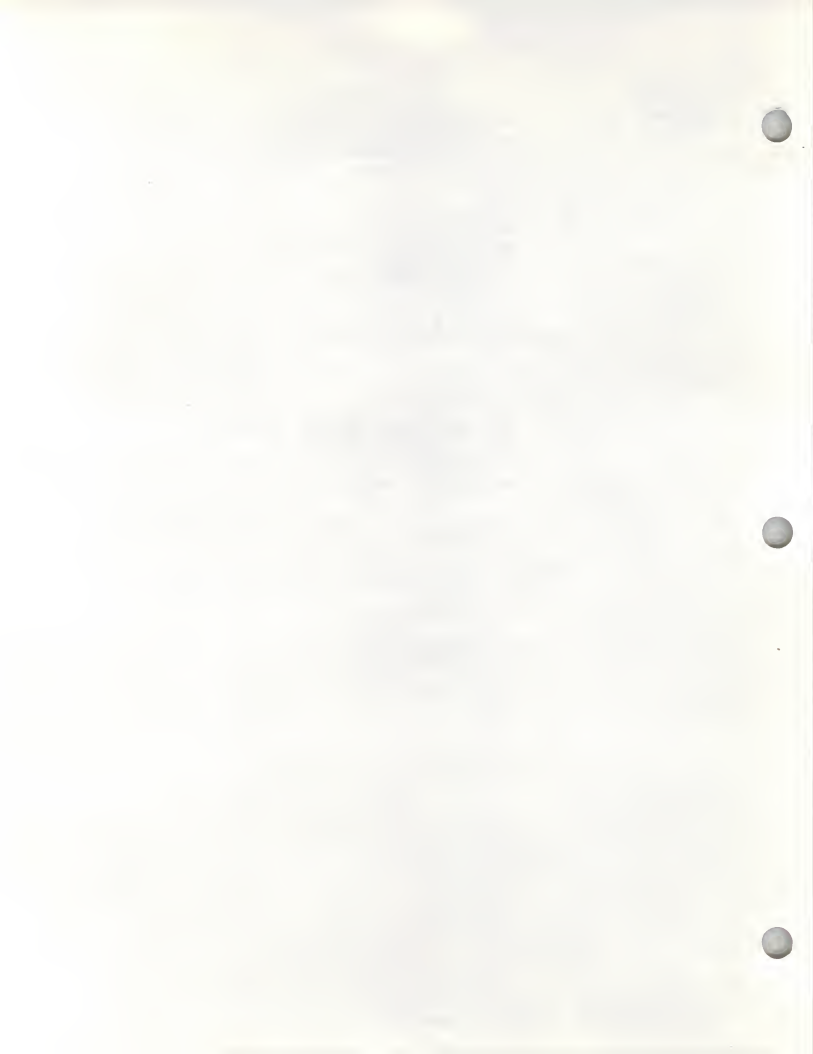
The Arlington Heights data center provides service for the National Service Product.

- The Arlington Heights data center now services a cumulative total of 1.8 million accounts for its clients. The accounts are serviced through 3,000 teller terminals and ATMs, which process 500,000 transactions per day.

The Troy data center supports all on-line GALAXY 2000 Credit Union System processing clients.

Nine data centers--Amarillo, Hammond, Scotts Valley, Lansing, Bay City, Matteson, Owensboro, Honolulu, and Woburn--provide systems operations (facilities management) processing services.

Three Research and Development Centers are located in San Diego (CA), Raleigh (NC), and Orlando (FL).



COMPANY PROFILE

CITICORP INFORMATION RESOURCES

75 Holly Hill Lane
Greenwich, CT 06830
(203) 625-7500

Pablo Gonzalez, Chairman
Subsidiary of Citicorp
Total Employees: 1,250
Total Revenue, Fiscal Year End
12/31/86: \$100,000,000

THE COMPANY

- Citicorp Information Resources (CIR) provides processing, associated support services, and software products to banks, thrifts (savings and loans, savings institutions, and mutual savings banks), and credit unions.
 - CIR was incorporated in 1979 with a charter to provide financial institutions with a range of information services.
 - It is the only Citicorp subsidiary that derives its revenue entirely from noncaptive sources.
- CIR's revenues have remained the same over the past three years and were approximately \$100 million in 1986, 1985, and 1984.
 - Clients have decreased from 1,300 in 1985 to 1,200 in 1986, in part from consolidation in the banking industry.
 - CIR is making a major investment to standardize and update its on-line processing services and has released three software products--National Standard System and Comprehensive Banking System (CBS) for banks and thrifts, and Galaxy 2000 Credit Union System for credit unions.
- CIR was formed and has continued to expand through the acquisition of data processing companies providing services exclusively to banks, thrifts, and credit unions. Since 1980, CIR has acquired nine processing services companies as follows:
 - In January 1980 CIR acquired PG Data of Garrettsville (OH). PG Data provided data processing services to the banking industry.
 - In February 1980 CIR acquired the Colorado Computer Center of Denver (CO). The Colorado Computer Center provided data processing services to Colorado banks.

- In March 1980 CIR acquired Financial Data Systems (FDS) of St. Louis (MO). FDS was a leading computer services center in the thrift industry with data centers in Chicago, St. Louis, Buffalo, Schenectady, and Boston. In 1979 the company had revenues of \$10 million and approximately 260 employees.
- In April 1980 CIR acquired Computer Professionals Unlimited, Inc. (CPU) of Southfield (MN). CPU provided remote, batch, and facilities management processing services to credit unions and had data centers in Connecticut, Illinois, Michigan, Ohio, Wisconsin, Minnesota, Missouri, Georgia, and West Virginia. At the time of acquisition, CPU had revenues of \$9.8 million and 110 employees.
- Inter-Continental Computing, Inc. (ICCI) of Shawnee Mission (KS) was acquired in July 1980. ICCI provided remote processing services to credit unions and was expanding into the turnkey business at the time of acquisition. In 1979 revenues were approximately \$3.2 million. ICCI had 80 employees and branch offices in Los Angeles, Houston, Columbia (SC), Albany, and Kansas City (KS).
- In November 1980 CIR acquired Bankers Data Processing of Boston (MA). Bankers Data Processing provided remote and batch services to banks, thrifts, and credit unions.
- In January 1981 CIR acquired CUAC, a credit union league service organization located in Columbia (SC).
- A second credit union league service organization, League Services Inc. of Seattle (WA), was acquired in April 1981.
- In March 1983 CIR made its largest acquisition, National Sharedata, Inc. of Dallas (TX). In 1982 National Sharedata had revenue of \$15 million and 412 employees. The company provided facilities management, on-line, and batch processing services for banks. National Sharedata's processing centers were located in Wisconsin, Indiana, North Dakota, Nevada, Illinois, and Texas.
- Prior to being acquired by CIR, each of these companies had existing software, equipment, communications networks, and client bases. Over the past five years, CIR has merged the companies into a unified organizational structure with a single set of operating procedures and is in the process of standardizing its product offerings.
- On June 22, 1987, CIR purchased the CBS (Comprehensive Banking System) software product from The Newtrend Group, Inc. of Orlando (FL).
- Under the terms of the purchase, CIR will own all rights to further development and marketing of the CBS product.

- The CBS software business will remain in Orlando and approximately 50 programmers and support personnel formerly employed by Newtrend have become CIR employees.
- As of June 1, 1987, CIR had 1,250 employees.
- CIR's competition comes from both regional and national companies. National competitors include MTech, Automatic Data Processing, Inc., Electronic Data Systems Corporation, Control Data Corporation, and NCR Data Services. Regional competitors include Mellon Bank and Norwest Corporation information centers.

KEY PRODUCTS AND SERVICES

- Approximately 81% of CIR's fiscal 1986 revenue was derived from remote computing, 11% from facilities management processing services, and 8% from applications software.
 - CIR has seven facilities management centers located in Hammond (LA), Concord (CA), Amarillo (TX), Lansing (MI), Woburn (MA), Seattle (WA), and Arlington Heights (IL).
 - One hundred percent of CIR's applications software revenue was derived from credit unions and major banks.
- The company's primary market for its products are banks, thrifts, and credit unions ranging in asset size from as small as \$5 million to over \$3 billion.
- Over 10 data centers provide processing services to 1,300 clients at 2,300 locations in 43 states. Over 2.7 million on-line transactions are processed daily for 16 million on-line accounts.
- CIR offers remote computing services for banks and thrifts through its on-line service, The National Standard Product, or through its facilities management services.
 - The National Standard Product is an integrated on-line set of financial applications software licensed from Florida Software Services of Orlando (FL) in 1984. The software has been customized by CIR to meet the needs of its customers.
 - The National Product is currently processed out of data centers in Arlington Heights (IL), Woburn (MA), and Denver (CO).
 - The National Product offers the following features:
 - Banking applications include:
 - Regular Passbook, Statement, and Club Accounts.

- Certificates with on-line rate control and automatic rollover processing.
- Demand Deposit Accounts with NOW Account support.
- Commercial Loans with detailed portfolio analysis and participation support.
- Installment Loans with variable rate and dealer reserve processing.
- Customer Profitability Analysis supporting ratio analysis for 19 user-defined profit factors.
- Central Information File with on-line customer statements and on-the-spot customer analysis.
- Mortgage Loan processing with adjustable mortgage and secondary market support.
- Retirement Accounts with required government reporting.
- Account Reconciliation with flexible reconciliation schedules.
- Proof of Deposit with full float tracking.
- General Ledger with automated interface from all applications, including budget reporting and forecasting.
- ATM processing from selected transaction sources.
- Equity Loan (as part of the Line of Credit feature).
- Thrift processing applications include:
 - Regular Passbook and Statement Accounts.
 - Certificates with on-line rate control and automatic rollover processing.
 - NOW Accounts with on-line activity history, stop payment and rate control, and inclearing rejects inquiry.
 - Retirement Account consolidated processing.
 - Adjustable Mortgage Instrument Processing with on-line rate control and automatic production of consumer documents.

- Consumer Loans.
 - Line of Credit Accounts.
 - Construction Lending.
 - Mortgage Loans.
 - Customer Information Management System.
 - On-line History.
 - Teller Cash Management.
 - Automatic Transfer System.
 - Automated Teller Machines.
 - Statement Processing for all account types.
 - Secondary Mortgage Market and government reporting.
 - Federal Recurring Payments.
 - Automated Tax Disbursements.
 - Equity Loans.
 - Interfaced General Ledger.
- CIR provides the CBS in-house system to banks and thrifts. CIR also offers CBS through a facilities management arrangement.
 - The CBS system incorporates a range of applications for bank transaction handling and accounting requirements.
 - CBS supports a data base environment and runs on IBM System 38 computers.
 - More than 70 banks have installed CBS worldwide.
 - The Comprehensive Banking System is a real time, integrated software product that consists of seven integrated subsystems:
 - Common File, an on-line parameter file that controls all CBS options. The Common File helps to customize CBS to offer unique services based on the specific requirements by customers.

- Customer Information File (CIF) automatically tracks and correlates all of a customer's relationships with the institution.
- Proof of Deposit (POD) serves as a central point of distribution and control for all monetary transactions. POD controls and automates paper-based MICR item processing and supports ATMs and Automated Clearing House (ACH) processing.
- General Ledger, an integrated financial accounting and control subsystem, is designed to support the reporting requirements of management and regulatory compliance. The General Ledger includes automated support for financial accounting, cost accounting, budgeting, forecasting, teller/branch cash control, account reconciliation, and open-item reporting.
- Transaction, an integrated deposit processing system, supports traditional and innovative transaction-based deposit services, including checking, regular passbook savings, statement savings, club, NOW, Super NOW, Money Market, and HIFI accounts.
- Time is the investment or term-deposit management module of CBS. It supports a range of account types: certificates of deposit (CDs), time deposit open accounts (TDOAs), IRAs, SEPs, Keoghs, repurchase agreements, and Money Market certificates.
- Loan, a universal loan subsystem, supports the automated processing of real estate, commercial, and consumer lending operations. It integrates the advanced features of each traditional lending area into a centralized, automated operation.
- CIR's GALAXY 2000 Credit Union System is available as an on-line remote computing service, an in-house software product, or a facilities management professional service.
 - The software runs on Data General hardware. Hardware for the system is sold to clients through a joint marketing agreement between CIR and the hardware vendor.
 - There are currently 160 in-house systems installed for credit union clients.
 - The company offers remote computing services through its GALAXY 2000 to approximately 700 credit unions. Services offered are as follows:
 - On-line posting and updating of accounts and loans.
 - Capability for history, status, production of member documents, and activity and audit reporting.

- GALAXY 2000 applications include:
 - . Member Share and Loan Processing.
 - Real time update.
 - On-line history.
 - Full Loan setup and disclosure.
 - On-line check/receipt writing.
 - Payroll.
 - Variable rate shares and loans.
 - Club accounts processing.
 - Home equity line.
 - Collection/delinquency control.
 - Real estate mortgage loan application.
 - . Share Draft Processing.
 - Electronic item capture and post.
 - Overdraft protection.
 - Line of credit loans.
 - Descriptive monthly statements.
 - On-line history.
 - . Certificate of Deposit Processing.
 - Certificates of deposit.
 - Money market accounts.
 - IRAs.
 - . General Ledger.
 - Automatic accruals.
 - State of condition.
 - Statement of income and expense.
 - Budget analysis.
 - . Electronic Funds Transfer.
 - VISA debit.
 - Credit bureau reporting.
 - ATM processing.
 - ACH processing.
 - Direct deposit payroll.
 - . Optional software enhancements include ATM and audio response facilities allowing members to call for account balances and share draft-clear information.
 - . The system has multiple branch flexibility.

- CIR offers distributed processing for banks, thrifts, and credit unions through its OnSite Teller Terminal System.
 - The OnSite Teller Terminal System is a distributed processing system using CIR's software and ISC Systems Corporation or IBM 4700 terminals.
 - The terminals are sold through a joint marketing agreement between CIR, IBM, and ISC. Typically, CIR sells the terminals that are then installed and maintained by the hardware vendor.
 - CIR will preplan the configuration design with clients and provide ongoing training as a part of the installation contract.
 - The Teller Terminal Systems interface with CIR's OnLine Services and The National Standard Product.
 - Features offered by the Teller Terminal System include:
 - On-line communication between supervisors and tellers.
 - Printing and validation of checks, forms, and documents at the teller window to facilitate the opening of new accounts.
 - An automated cashdrawer balancing function.
 - A CRT mode which permits the user to make history inquiries and determine account status. It also has CIF and file maintenance capabilities.
 - Security for the system is provided by administrative and control features which restrict access by requiring special passwords that are not displayed on the CRT screen.
- Customer installation and training is provided at CIR centers or at the client's site. CIR prepares data and exposes clients to a hands-on training environment. The client can also perform acceptance testing and parallel operations prior to moving to live processing.

INDUSTRY MARKETS

- One hundred percent of CIR's 1986 revenue was derived from the banking and finance industry. A further breakdown of revenue is as follows:

Banks	41%
Thrifts	31
Credit Unions	<u>28</u>
	100%

- Processing was divided between banks, thrifts, and credit unions.
- One hundred percent of software revenue from in-house systems was derived from credit unions and bank clients.
- CIR services over 1,300 financial institution clients. Major clients include First Guaranty Bank, Hammond (LA).

GEOGRAPHIC MARKETS

- One hundred percent of CIR's 1986 revenue was derived from the U.S.
- Sales offices are located in Wilton (CT), Southfield (MI), Concord (CA), Woburn (MA), Indianapolis (IN), St. Louis (MO), Denver (CO), Bellevue (WA), San Diego (CA), Overland Park (KS), Troy (MI), Columbia (SC), Atlanta (GA), Arlington Heights (IL), Bala Cynwyd (PA), Birmingham (AL), Hanover (MD), New York, Los Angeles, Dallas (TX), Houston (TX), and St. Louis (MO).

COMPUTER HARDWARE AND SOFTWARE

- CIR operates over 10 data centers, as follows:
 - Data Centers are located in California (2), Colorado, Illinois, Indiana, Massachusetts, Michigan, Missouri, South Carolina, Texas, Louisiana, and Washington and generally have high-end mainframes installed including:
 - IBM 4341, operating under MVS.
 - IBM 3033, operating under DOS/USC and OS/MVS.
 - IBM 3031, operating under OS/VS1.
 - IBM 3083, operating under OS/MVS.
 - Unisys 70700, operating under MCP.
 - Data General MV 20000, operating under AOS/VS.
 - Three of the Data Centers--Denver (CO), Arlington Heights (IL), and Woburn (MA)--provide service for the National Standard Product.
 - Four Data Centers--Troy (MI), Columbia (SC), San Diego (CA), and Seattle (WA)--provide service for the GALAXY 2000 Credit Union System.
 - Six Data Centers--Amarillo (TX), Hammond (LA), Concord (CA), Lansing (MI), Chicago (IL), and Woburn (MA)--provide facilities management services.

- Two Regional Processing Centers are located in Missouri and Kansas.
- Three Research and Development Centers are located in San Diego (CA), Raleigh (NC), and Orlando (FL).
- The centers use a variety of mainframes, primarily because the computers were purchased prior to CIR's acquisition of each center. In its effort to standardize operating procedures, CIR's data centers are currently moving toward IBM equipment that operates in an XA environment and Data General equipment that operates in an AOS/VS environment.
- To provide on-line recovery services to CIR clients, CIR has contracted with Comdisco to support bank and thrift processing and Data Assurance Corporation to support the GALAXY 2000 Credit Union system.

COMPANY PROFILE

CITICORP INFORMATION RESOURCES

75 Holly Hill Lane
Greenwich, CT 06830
(203) 625-7500

George Fugelsang, Chairman
Subsidiary of Citicorp
Total Employees: 1,300
Total Revenue, Fiscal Year End
12/31/84: \$100,000,000*

THE COMPANY

- Citicorp Information Resources (CIR) provides processing, associated support services, and software products to banks, thrifts, and credit unions.
 - CIR was incorporated in 1979 with a charter to provide financial institutions with a range of information services.
 - It is the only Citicorp subsidiary that derives its revenue entirely from noncaptive sources.
- INPUT estimates that CIR's revenues were approximately \$100 million in 1983 and 1984.
 - Clients have decreased from 1,800 in 1983 to 1,600 in 1984, in part from consolidation in the banking industry.
 - CIR is making a major investment to standardize and update its processing services.
- CIR was formed and has continued to expand through the acquisition of data processing companies providing services exclusively to banks, thrifts, and credit unions. Since 1980, CIR has acquired nine processing services companies as follows:
 - In January 1980 CIR acquired PG Data of Garrettsville (OH). PG Data provided data processing services to the banking industry.
 - In February 1980 CIR acquired the Colorado Computer Center of Denver (CO). The Colorado Computer Center provided data processing services to Colorado banks.
 - In March 1980 CIR acquired Financial Data Systems (FDS) of St. Louis, (MO). FDS was a leading computer services center in the thrift industry with data centers in Chicago, St. Louis, Buffalo, Schnectedy, and Boston. In 1979 the company had revenues of \$10 million and approximately 260 employees.

*INPUT estimate

CITICORP INFORMATION RESOURCES

- In April 1980 CIR acquired Computer Professionals Unlimited, Inc. (CPU) of Southfield (MN). CPU provided remote, batch, and facilities management processing services to credit unions and had data centers in Connecticut, Illinois, Michigan, Ohio, Wisconsin, Minnesota, Missouri, Georgia, and West Virginia. At the time of acquisition, CPU had revenues of \$9.8 million and 110 employees.
 - Inter-Continental Computing, Inc. (ICCI) of Shawnee Mission (KS) was acquired in July 1980. ICCI provided remote processing services to credit unions and was expanding into the turnkey business at the time of acquisition. In 1979 revenues were approximately \$3.2 million. ICCI had 80 employees and branch offices in Los Angeles, Houston, Columbia, South Carolina, Albany, and Kansas City (KS).
 - In November 1980 CIR acquired Bankers Data Processing of Boston (MA). Bankers Data Processing provided remote and batch services to banks, thrifts, and credit unions.
 - In January 1981 CIR acquired CUAC, a credit union league service organization located in Columbia (SC).
 - A second credit union league service organization, League Services Inc. of Seattle (WA), was acquired in April 1981.
 - In March 1983 CIR made its largest acquisition, National Sharedata, Inc. of Dallas (TX). In 1982 National Sharedata had revenue of \$38 million and 412 employees. The company provided facilities management, on-line, and batch processing services for banks. National Sharedata's processing centers were located in Wisconsin, Indiana, North Dakota, Nevada, Illinois, and Texas.
 - Prior to being acquired by CIR, each of these companies had existing software, equipment, communications networks, and client bases. Over the past three years, CIR has merged the companies into a unified organizational structure with a single set of operating procedures and is in the process of standardizing its product offerings.
- As of December 31, 1984, CIR had 1,300 employees.
 - CIR's competition comes from both regional and national companies. National competitors include Anacom, Automatic Data Processing, Inc., Electronic Data Systems Corporation, Control Data Corporation, and NCR Data Services. Regional competitors include Mellon Bank and Norwest Corporation information centers.

KEY PRODUCTS AND SERVICES

- INPUT estimates that approximately 85% of CIR's fiscal 1984 revenue was derived from remote computing and facilities management processing services and 15% from applications software.

CITICORP INFORMATION RESOURCES

- CIR has four facilities management centers located in Reno (NV), Rockford (IL), Concord (CA), and Amarillo (TX), accounting for approximately 20% of processing revenues.
- One hundred percent of CIR's applications software revenue was derived from credit unions and major banks.
- The company's primary market for its products are banks, thrifts, and credit unions ranging in asset size from as small as \$50,000 to over \$500 million.
- Over 21 data centers provide processing services to 1,600 clients at 2,300 locations in 34 states. Over 2.7 million on-line transactions are processed daily for 16 million on-line accounts.
- CIR offers remote computing services through its On-Line Services and a new service, The National Standard Product.
 - On-Line Services offers financial applications for banks, thrifts, and credit unions.
 - Banking applications include the following features:
 - Regular Passbook, Statement, and Club Accounts.
 - Certificates with on-line rate control and automatic rollover processing.
 - Demand Deposit Accounts with NOW Account support.
 - Commercial Loans with detailed portfolio analysis and participation support.
 - Installment Loans with variable rate and dealer reserve processing.
 - Customer Profitability Analysis supporting ratio analysis for 19 user-defined profit factors.
 - Central Information File with on-line customer statements and on-the-spot customer analysis.
 - Mortgage Loan processing with adjustable mortgage and secondary market support.
 - Retirement Accounts with required government reporting.
 - Account Reconciliation with flexible reconciliation schedules.

CITICORP INFORMATION RESOURCES

- Proof of Deposit with full float tracking and available funds analysis.
- General Ledger with automated interface from all applications, including budget reporting and forecasting.
- ATM processing from selected transaction sources.

• Thrift processing applications include the following features:

- Regular Passbook and Statement Accounts.
- Certificates with on-line rate control and automatic rollover processing.
- NOW Accounts with on-line activity history, stop payment and rate control, and inclearing rejects inquiry.
- Retirement Account consolidated processing.
- Adjustable Mortgage Instrument Processing with on-line rate control and automatic production of consumer documents.
- Consumer Loans.
- Line of Credit Accounts.
- Construction Lending.
- Share Loans.
- Customer Information Management System.
- On-line History.
- Teller Cash Management.
- Automatic Transfer System.
- Automated Teller Machines.
- Statement Processing for all account types.
- Secondary Mortgage Market and government reporting.
- Federal Recurring Payments.
- Automated Tax Disbursements.

CITICORP INFORMATION RESOURCES

- . Credit Union applications include:
 - Member Share and Loan Processing.
 - . Realtime update.
 - . On-line history.
 - . Full Loan setup and disclosure.
 - . On-line check/receipt writing.
 - . Payroll.
 - . Variable rate shares and loans.
 - . Club accounts processing.
 - Share Draft Processing.
 - . Electronic item capture and post.
 - . Overdraft protection.
 - . Line of credit loans.
 - . Descriptive monthly statements.
 - . On-line history.
 - Certificate of Deposit Processing.
 - . Certificates of deposit.
 - . Money market accounts.
 - . IRAs.
 - General Ledger.
 - . Automatic accruals.
 - . State of condition.
 - . Statement of income and expense.
 - . Budget analysis.
 - Electronic Funds Transfer.
 - . VISA debit.
 - . Credit bureau reporting.
 - . ATM processing.
 - . ACH processing.
 - . Direct deposit payroll.
- The National Standard Product is an integrated on-line set of financial applications software purchased from Florida Software Services of Orlando (FL) in 1984.
- . The National Standard Product is designed to offer clients with relatively small assets access to software normally used by much larger financial institutions. CIR believes that the National Standard Product will be profitable because of the economies-of-scale that will be provided by a larger client base.

CITICORP INFORMATION RESOURCES

- . The National Standard Product offers 19 integrated applications. Each application interfaces with similar modules. The applications available and their application area are as follows:
 - Deposit Services.
 - . Demand Deposit/Share Draft Accounting.
 - . Account Reconciliation.
 - . Savings/Shares.
 - . Certificates of Deposit.
 - Credit Services.
 - . Credit Line.
 - . Mortgage Loans.
 - . Installment Loans.
 - . Commercial Loans.
 - . Dealer Floor Plan.
 - Management Support.
 - . Central Information File.
 - . Asset/Liability Management.
 - . Customer Profitability Analysis.
 - . Financial Management (General Ledger, Budgeting, and Forecasting).
 - . Marketing Model.
 - Client Support.
 - . Payroll/Personnel.
 - . Supplies Inventory.
 - Consumer Access.
 - . Teller Terminals.
 - . Automated Teller Machines.
- . In addition to specialized functions, each application is capable of generating a wide variety of specialized reports, posting transactions, making history inquiries, and interfacing with the general ledger.
- . CIR is enhancing the National Standard Product with real-time, on-line capabilities required by its credit union and thrift clients. The rollout of the enhanced National Standard Product will begin at the end of 1985.
- . Clients can access multiple data bases for customized analysis and report operation through an Information Analysis Center.

CITICORP INFORMATION RESOURCES

At present, there is one center located in Chicago and a second center is planned to be located in Woburn (MA).

- CIR offers distributed processing for banks, thrifts, and credit unions through its OnSite Teller Terminal System.
 - The OnSite Teller Terminal System is a distributed processing system using CIR's software and ISC Systems Corporation or IBM 4700 terminals.
 - The terminals are sold through a joint marketing agreement between CIR, IBM, and ISC. Typically, CIR sells the terminals that are then installed and maintained by the hardware vendor.
 - CIR will preplan the configuration design with clients and provide ongoing training as a part of the installation contract for up to one year.
 - The Teller Terminal Systems interface with CIR's OnLine Services and The National Standard Product.
 - Features offered by the Teller Terminal System include:
 - On-line communication between supervisors and tellers.
 - Printing and validation of checks, forms, and documents at the teller window to facilitate the opening of new accounts.
 - An automated cashdrawer balancing function.
 - A CRT mode which permits the user to make history inquiries and determine account status. It also has CIF and file maintenance capabilities.
 - Security for the system is provided by administrative and control features which restrict access by requiring special passwords that are not displayed on the CRT screen.
- Inhouse Systems is CIR's transactions processing software package for credit unions and banks. The software runs on Data General and GEAC equipment.
 - Hardware for the system is sold to clients through a joint marketing agreement between CIR and the hardware vendor.
 - There are currently 210 Inhouse Systems installed for credit union clients.

CITICORP INFORMATION RESOURCES

- Inhouse Systems offers the following applications and processing capabilities:
 - On-line transaction processing includes single number transaction entry and information retrieval and certificate and loan processing.
 - A full range of account processing for all types of shares, loans, and certificates.
 - A custom Report Writer enables users to run any standard report in-house and provides the ability to access any field in the data base by select-and-sort features.
 - A word processing function provides for targeted member mailings.
 - Optional software enhancements include ATM and audio response facilities allowing members to call for account balances and share draft-clear information.
 - The system has multiple branch flexibility.
- The software packages are priced upon request.
- Customer installation and training is provided at centers located in Chicago and Boston. CIR prepares data and exposes clients to a hands-on training environment. The client can also perform acceptance testing and parallel operations prior to moving to the host processing center.

INDUSTRY MARKETS

- One hundred percent of CIR's 1984 revenue was derived from the banking and finance industry. A further breakdown of revenue is as follows:

Banks	38%
Thrifts	28
Credit Unions	<u>34</u>
	100%

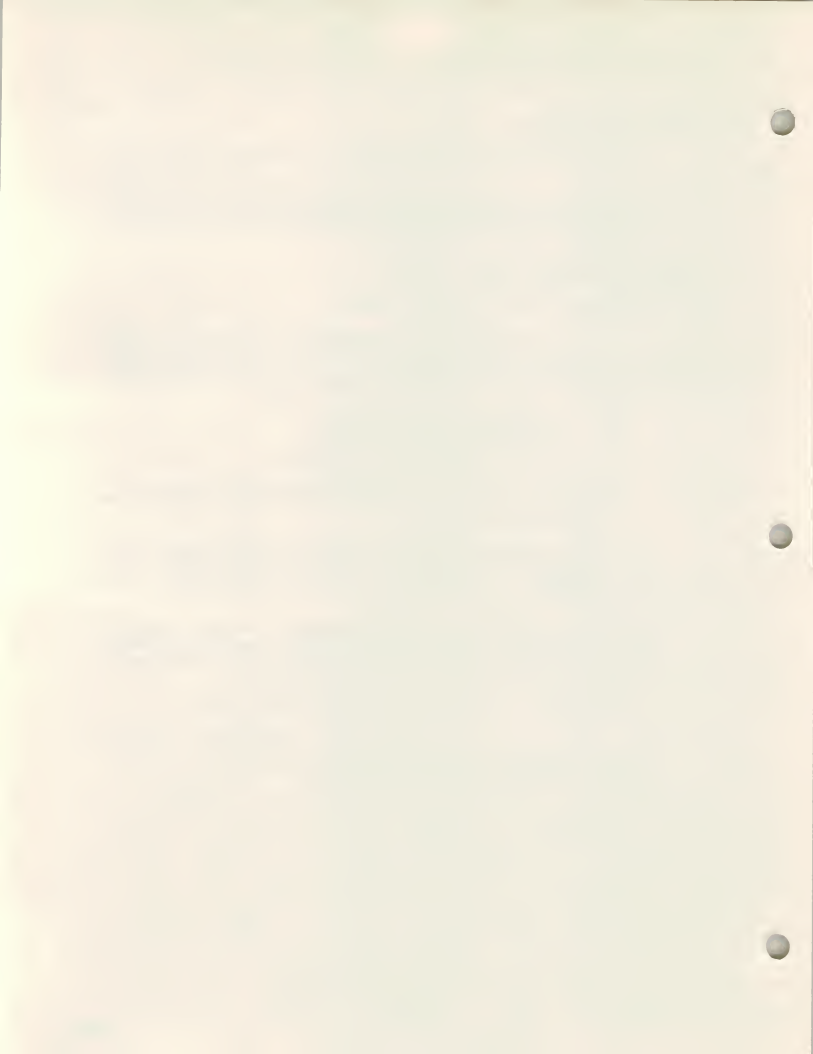
- Processing was divided between banks, thrifts, and credit unions.
- One hundred percent of software revenue, Inhouse Systems, was derived from credit unions and bank clients.

GEOGRAPHIC MARKETS

- One hundred percent of CIR's fiscal 1984 revenue was derived from the U.S.
- Sales offices are located in Wilton (CT), Southfield (MI), Concord (CA), Woburn (MA), Norcross (GA), Elmhurst (IL), Indianapolis (IN), St. Louis (MO), Denver (CO), Bellevue (WA), San Diego (CA), Overland Park (KS), Troy (MI), Columbia (SC), and Garrettsville (OH).

COMPUTER HARDWARE AND SOFTWARE

- CIR operates over 21 data centers, as follows:
 - Seventeen Host Data Centers are located in California (2), Colorado, Illinois (3), Indiana, Kansas, Massachusetts, Michigan, Missouri, New York, Nevada, Ohio, South Carolina, Texas, and Washington and generally have high end mainframes installed including:
 - IBM 4341, operating under MVS.
 - IBM 3033, operating under DOS-USC.
 - IBM 3031, operating under OS-VSI.
 - Burroughs 70700, operating under MCP.
 - Four of the Host Centers will be dedicated to providing service for The National Standard Product.
 - Nineteen Regional Processing Centers are located in Massachusetts, New York (2), South Carolina, Texas, Ohio, Indiana, Illinois, Maryland, Michigan (2), Missouri (2), Kansas, Colorado, California (2), Washington, and Texas.
- The centers use a variety of mainframes, primarily because the computers were purchased prior to CIR's acquisition of each center. In its effort to standardize operating procedures, CIR's data centers are currently moving toward IBM equipment that operates in an MVS environment.
- The Information Analysis Center is equipped with IBM mainframes.
- CIR also operates a standalone offsite backup facility located in Ohio. The facility is equipped with IBM mainframes for providing on-line recovery services to CIR clients should the need arise.
- Clients access services through CIR's proprietary network, CITILINK.



COMPANY PROFILE

CITIZENS FINANCIAL CORPORATION
7061 E. Pleasant Valley Road
Independence, OH 44131
(216) 447-1740

J.P. Cozzens, Chairman, President, and
CEO
Public Corporation, OTC
Total Employees: 93
Total Revenue, Fiscal Year End
12/31/86: \$11,081,678
Computer Services Revenue:
\$10,354,633

THE COMPANY

- Citizens Financial Corporation (CFC), founded in 1940, currently operates as a holding company for two wholly owned subsidiaries as follows:
 - Processing services to the financial industry, which contributed 94% to CFC's 1986 revenue, are provided through Champion Service Corporation, headquartered in Cleveland.
 - General insurance agency services are provided through United Underwriters Insurance Service, Inc., headquartered in Independence.
- 1986 total revenue reached \$11.1 million, a 6% increase over 1985 revenue of \$10.5 million. Computer services revenue reached \$10.4 million compared to \$9.8 million in 1985. A five-year financial summary follows:

CITIZENS FINANCIAL CORPORATION

CITIZENS FINANCIAL CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

FISCAL YEAR ITEM	1986	1985	1984	1983	1982
Revenue					
. Computer services	\$ 10,355	\$ 9,836	\$ 9,203	\$ 9,018	\$ 7,466
. Other	<u>727</u>	<u>628</u>	<u>802</u>	<u>614</u>	<u>553</u>
	\$ 11,082	\$ 10,464	\$ 10,005	\$ 9,632	\$ 8,019
. Percent increase from previous year	6%	5%	4%	20%	10%
Income before taxes	\$ 2,535	\$ 2,729	\$ 2,550	\$ 2,447	\$ 1,899
. Percent increase (decrease) from previous year	(7%)	7%	4%	29%	2%
Net income	\$ 1,268	\$ 1,356	\$ 1,258	\$ 1,426	\$ 945
. Percent increase (decrease) from previous year	(6%)	8%	(12%)	51%	(8%)
Earnings per share	\$ 0.62	\$ 0.64	\$ 0.48	\$ 0.50	\$ 0.33
. Percent increase (decrease) from previous year	(3%)	33%	(4%)	52%	(8%)

- Of the company's 93 employees, approximately 83 are employed at Champion Service Corporation.
- Major competitors in the processing services area include NCR, Automatic Data Processing, Savings & Loan Data Corporation, and Financial Accounting Services.

KEY PRODUCTS AND SERVICES

- Approximately 94% of CFC's 1986 revenue was derived from processing services provided through Champion Service Corporation. The remainder of revenue was derived from noncomputer services-related insurance sales.
- Champion currently provides on-line processing services to 78 customers in the financial industry. Substantially all of the company's clients are savings and loans.
 - Applications supported include accounting and information management for savings accounts (including NOW accounts, certificates of

CITIZENS FINANCIAL CORPORATION

deposit box accounting, loan tracking, commercial lending, commercial checking, adjustable rate mortgage, home equity lending, and reporting.

- During the fourth quarter of 1986, the company introduced Bank Planner, a microcomputer software product for asset/liability management. Priced at \$4,200, there are currently three systems installed.

INDUSTRY MARKETS

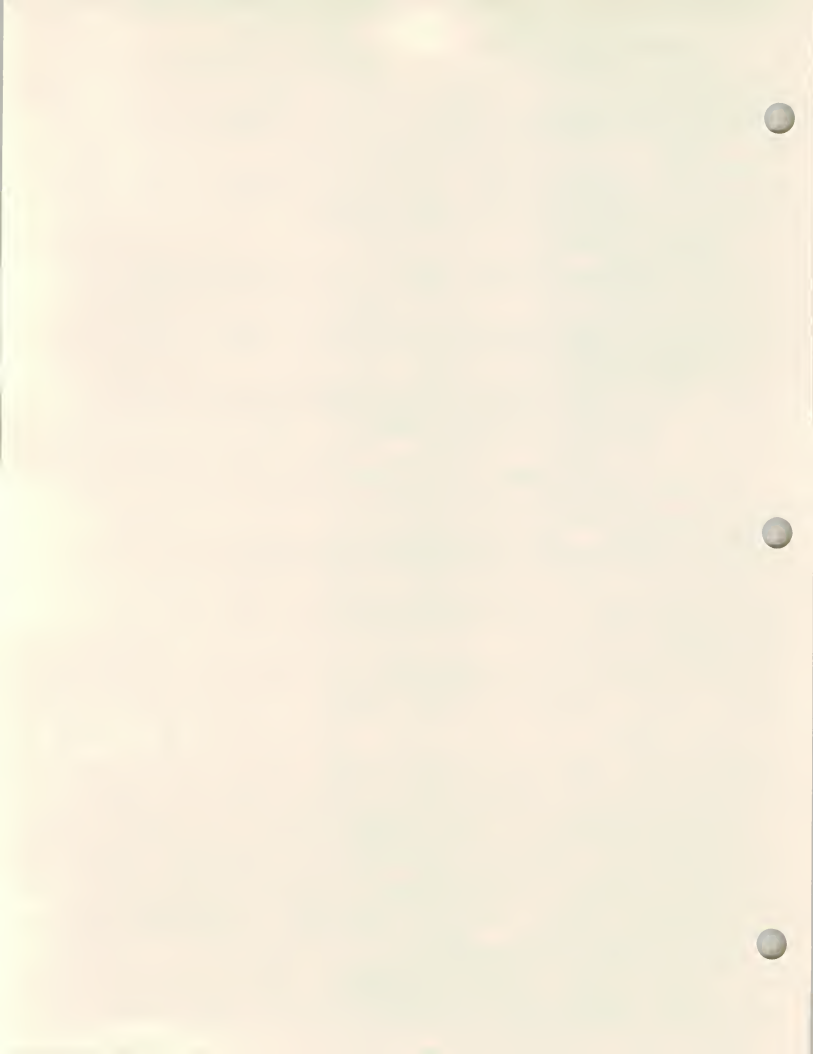
- One hundred percent of computer services revenue is derived from the financial industry.
- During 1986, the company's three largest customers accounted for 22% of total revenue.

GEOGRAPHIC MARKETS

- One hundred percent of revenue is derived from the U.S. Champion's market area includes eight states and is generally within a 600-mile radius of Cleveland (OH).
- CFC management believes Champion is the largest independent processing services company for the thrift industry located in the state of Ohio.

COMPUTER HARDWARE AND SOFTWARE

- Champion's data center in Cleveland has five IBM 4341-11s, operating under DOS MVT/VSE installed. Clients access the data center via leased lines.



COMPANY PROFILE

CITY NATIONAL INFORMATION SYSTEMS

1730 West Olympic Boulevard
Los Angeles, CA 90015
(213) 480-7200

Newton Gore, CEO
Division of City National Corporation
Total Employees: 480*
Total Revenue Fiscal Year End
12/31/88: \$43,276,000
Noncaptive Information Services Revenue:
\$37,472,000

* INPUT estimate

The Company

City National Information Systems (CNIS), formed in 1972, is a division of City National Corporation that provides general ledger accounting, checking, and savings account processing, and loan accounting services to about 200 financial institutions.

- City National Corporation is the parent corporation for City National Bank, the tenth largest bank in California, and one of the 150 largest commercial banks in the U.S.

In 1987 CNIS divested two major portions of its processing services business. Both divisions had been unprofitable.

- The Payroll Processing Division was sold to Control Data Corporation for approximately \$2.3 million. The conversion of the payroll base to Control Data was completed in late 1987.
- The Instant Teller Division was sold to Automatic Data Processing, Inc. (ADP) for approximately \$5.8 million. The conversion of the Instant Teller services to ADP was due to be complete in late 1988.
- CNIS has established marketing agreements with the acquirers of both divisions and will continue to actively market their products.

Total 1988 revenue reached \$43.3 million, a 23% decrease from 1987 revenue of \$56.5 million. A four-year financial summary follows:

**CITY NATIONAL INFORMATION SYSTEMS
FOUR-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR			
	1988	1987	1986	1985
Revenue	\$43.3	\$56.5	\$48.5	\$44.7
• Percent increase (decrease) from previous year	(a) (23%)	(b) 16%	9%	N/A
Noncaptive revenue	\$37.5	\$49.7	\$41.9	\$38.7
• Percent increase (decrease) from previous year	(a) (25%)	(b) 19%	8%	N/A
Operating profit	\$10.0	\$17.1	\$9.0	\$6.7
• Percent increase (decrease) from previous year	(a) (42%)	(b) 90%	34%	N/A
Income before taxes	\$8.4	\$14.6	\$6.9	\$4.9
• Percent increase (decrease) from previous year	(a) (42%)	(b) 112%	41%	N/A

(a) Includes \$1 million for the balance of the sale of the Instant Teller Division.

(b) Includes \$7.1 million from the sale of the Instant Teller and Payroll Processing Divisions.

The decrease in revenue from 1987 to 1988 is exaggerated due to the inclusion of \$7.1 million in revenue in 1987 from the sale of the Payroll Processing and Instant Teller Divisions, as well as loss of revenue from these divisions in 1988.

Key Products and Services

One hundred percent of CNIS's 1988 revenue was derived from its processing services.

CNIS management considers its processing business to be mature and is seeking to grow by developing new products and expanding into new areas.

CNIS offers check and collection item processing, trust department accounting, general ledger accounting, checking and savings account processing, and loan accounting, as well as many of the necessary back office processing services required at

commercial banks and similar financial institutions. CNIS also introduced the following products in 1987:

- POD (proof of deposit), is a basic back office service that provides for capture of float information and reduces the processing and balancing performed by the independent banks. POD was introduced in the fourth quarter of 1987, and is expected to become one of the future mainstay products for CNIS.
- Also in the fourth quarter of 1987, CNIS introduced a computerized voice response system by which correspondent bank customers can make telephone inquiries about their accounts. The voice activated service provides information on checking and savings balances, items paid and deposit amounts. The customer may access the system using any touch-tone telephone. The system uses a microcomputer with specialized software and hardware that is maintained at the CNIS Computer Center in Los Angeles.
- A central file system that provides a means by which a bank can examine its entire relationship with every customer.
- A fully integrated commercial loan system including the following features: a fully integrated general ledger, automatic spread of general ledger entries, a tickler system that tracks past-due payments and other items, automatic division of payments between interest and principal, and automatic renewals.
- A mortgage accounting system that processes bi-weekly payments, shortening the loan term and reducing interest outlays.
- A branch automation system that further automates certain branch functions, enabling tellers to provide customers with information on certain transactions without leaving their windows as they have had to do previously. Platform officers can now also use the system to access information on various bank services.
- Ad Hoc Data Extract System is a means by which customers may select and extract data from application files on the CNIS central computers and download them to their own microcomputers for further analysis.

Industry Markets

CNIS targets commercial banks, savings and loan associations, certified public accounting firms, and business agents. CNIS serves approximately 200 customers.

Geographic Markets

One hundred percent of CNIS's 1988 revenue was derived from the West Coast of the U.S.

Computer Hardware and Software

CNIS' three data capture centers and its Computer Center are located as follows:

- Data Capture Centers: Fresno and Oakland (CA), and Portland (OR).
- Computer Center: Los Angeles (CA).

Processing is done on IBM 3033 mainframe processors.

COMPANY BRIEF

Primary Industry-Specific Market: Banking and Finance

City National Information Systems

1730 West Olympic Boulevard
Los Angeles, CA 90015
(213) 480-7321

CEO: Donald L. Wyre, Senior Vice President
Division of: City National Bank
Founded: 1878

Employees: 450* (12/85)
Revenue (FYE 12/31/85): \$44.7 million
Noncaptive Revenue (FYE 12/31/85): \$38.7 million

The Company: City National Information Systems provides data processing services for other banks and financial institutions; electronic funds transfer (EFT); and financial services for City National Bank's corporate customers

Sources of Revenue:

- Processing/Network Services (100%)

Key Services:

- Processing Services (Utilizes IBM mainframe computers)
 - Instant Teller ATM network
 - Batch processing services
 - Checking account processing
 - Savings account processing
 - Loan recordkeeping
 - General ledger accounting
 - Payroll services

Target Industries:

- Commercial banks
- Savings and loan associations
- Certified public accounting firms
- Business agents

Geographic Market:

- U.S. (100%)
- Sales Office: Los Angeles
- Customers are located mainly in California and Oregon

*INPUT estimate

October 1986

Other:

- In 1984, Instant Teller, which was the fourth largest U.S. ATM network, became part of the CIRBUS nationwide ATM network

October 1986

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1996

Claris Corporation

President : Guerrino De Luca
5201 Patrick Henry Drive
Box 58168
Santa Clara, CA 95052-8186
Phone: (408) 987-7000
Fax: (408) 987-7440
Internet: <http://www.claris.com>



Status:	Subsidiary
Parent:	Apple Computer, Inc.
Employees:	700 (11/96)
Revenue:	\$236,200,000
Fiscal Year End:	9/30/96

Key Points

- Claris provides cross-platform PC software for business, education, and home users.
- Claris claims to be the largest Macintosh software vendor (measured by units shipped). This year the company expects to ship approximately eight million units (excluding upgrades), including two million Windows units.

- Small business customers and K-12 education users continue to be among the company's most important markets.
- Claris has formalized its Internet solutions and product strategy and is committed to making the Internet truly usable for its customers.
- In August 1996, Claris shipped Claris Home Page, an easy-to-use solution for creating World Wide Web pages.

Company Description

Claris, formed in 1987, provides Macintosh and Windows-based software products for graphics, integrated, and database applications. Products are targeted to small

business, home, K-12 education, and enterprise markets.

In 1995, Claris began publishing software under both the Claris and Apple brands. Claris also has worldwide responsibility for distributing and selling all Apple software, including systems software which Apple continues to develop.

Claris operates as a wholly owned subsidiary of Apple Computer, Inc.

- Apple, based in Cupertino (CA), provides integrated solutions based on personal computers, servers, peripherals, software, personal digital assistants, and Internet content to business, education, consumer, entertainment, scientific and engineering, and government customers worldwide.
- Apple, with approximately 15,500 employees, reported revenue of \$9.833 billion and net losses of \$816 million for the fiscal year ending September 27, 1996.

Organization and Structure

Claris is headquartered in Santa Clara (CA).

International subsidiary offices are in Australia, Belgium, the Netherlands, France, Germany, Japan, Sweden, New Zealand, and the U.K.

Company Strategy

The company's mission is to "create and publish award-winning, simply powerful software to propel business, education, and home users to even greater creativity and productivity."

Claris will continue to focus on software for small business, home, K-12 education, and enterprise markets. To better meet customers' needs, the company is focusing on the following future-technology initiatives:

- The Internet as an important platform for solutions
- Cross-platform technologies
- Component software (OLE and OpenDoc) support
- World-ready software

Internet Strategy

The Claris Internet philosophy is to:

- Provide software solutions that require little or no IS support
- Serve customers with either full-time or intermittent connections
- Internet- and intranet-enable the existing Claris product line
- Expand the Claris portfolio consistent with its customer focus

Claris is committed to "clarifying the Internet" for its customers by:

- Expanding its product line based on key initiatives designed to bring the productivity power of the Internet to customers, including:
 - Dynamic database publishing for Internet and intranets
 - Web authoring
 - Internet e-mail
- Infusing its product line with the best available Internet technology, including:
 - Integrated application World Wide Web access
 - Support for the latest Web standards

- Pervasive product line HTML output
- Web-based support and registration

Financials

Fiscal 1996 revenue reached \$236.2 million, a 42% increase over fiscal 1995 revenue of \$166.6 million. A five-year revenue summary is shown below.

The high growth in revenue year-over-year was due largely to strong sales of Apple-brand software, which Claris began distributing and selling one year ago. Revenue from new and

existing Claris-brand software also grew during the year.

- Claris Home Page, which first shipped in August 1996, accounted for strong revenue in the fourth quarter.
- New Japanese versions of FileMaker Pro 3.0 database software, ClarisWorks integrated software, and ClarisImpact business graphics software, all for Windows and Macintosh, shipped in the fourth quarter and created strong revenue in Japan.

Claris Corporation Five-Year Revenue Summary (\$ Millions, except per share data)

Item	Fiscal Year				
	9/96	9/95	9/94	9/93	9/92
Revenue	\$236.2	\$166.6	\$159.7	\$154.4	\$104.3
• Percent change from previous year	42%	4%	3%	48%	21%

Source of Revenue by Product/Service

One hundred percent of revenue is derived from software products. A further breakdown of revenue for fiscal 1996 by product line is estimated as follows:

Database products.....	30%
Integrated products.....	25%
Graphics products.....	20%
Apple-brand software.....	20%
Other.....	5%
	100%

For fiscal 1996, approximately 80% of revenue was derived from Macintosh-based products and 20% from Windows-based products.

Market Financials

Claris' revenue is derived from novice to generalized computer users in a range of industries.

Geographic Markets

Approximately 50% of Claris' revenue is derived from the U.S., 30% from the Asia/Pacific region, and 20% from Europe.

Claris has localized its products in more than 35 languages.

Acquisitions

In June 1996, Claris acquired Claris Home Page, a Macintosh and Windows web authoring application, from San Andreas Systems of Los Altos (CA). Claris Home Page was known by the code-name "Loma Prieta." Terms of the acquisition were not disclosed.

In July 1995, Claris licensed Claris Em@iler for worldwide distribution from Fog City Software, Inc., the developer of Claris Em@iler e-mail management software.

Employees

Claris currently has approximately 700 employees worldwide.

Key Products and Services

Claris currently offers proprietary software products for database, integrated, graphics, e-mail management, and information management, as well as Apple systems software products.

Database and Integrated Products

FileMaker Pro 3.0 is a relational database application for Macintosh, Windows 95, Windows NT, and Windows 3.1 environments.

FileMaker Pro Server 3.0 offers database file sharing and supports up to 100 concurrent Macintosh- and Windows-licensed FileMaker Pro users via AppleTalk, IPX/SPX, and TCP/IP networks simultaneously.

FileMaker Pro SDK 3.0 is used to develop and distribute runtime FileMaker solutions.

ClarisWorks 4.0 is an integrated word processing, outlining, spreadsheet, charting, database, presentations, graphics, and painting package for Macintosh, Windows 95, and Windows NT environments.

- ClarisWorks—Internet Edition includes ClarisWorks 4.0 software, Claris Home Page 2.0, small business templates, and WWW Yellow Pages. The Windows 95 version also includes SPRYNET and Netscape Navigator. The Macintosh version also includes the Apple Internet Connection Kit.

- The next version of ClarisWorks for Macintosh will feature OpenDoc container support and is expected to ship in mid-1997.

Claris Organizer is an intelligent personal information manager for the Macintosh that tracks contacts, appointments, to-do lists, and notes in a single, integrated application.

Language Dictionaries provide international spell checking for Claris products.

Internet Product

Claris Home Page is a Web page authoring solution for Macintosh and Windows environments.

Graphics Products

ClarisImpact 2.0 integrates the process of creating, editing, and communicating business graphics with reports and presentations into one application. The application automatically creates business graphics such as organizational charts, flow charts, data charts and tables, outlines, calendars, and timelines. The product is available for Macintosh and Windows environments.

ClarisDraw 1.0 is an integrated graphics package that provides drawing, text effects, color painting, and photo editing. It is available for Macintosh and Windows 95 and 3.1 environments.

Easy Business Cards is a do-it-yourself tool for creating professional-looking business cards. It is available for Windows environments.

E-mail

Claris OfficeM@il is an office and Internet e-mail solution for Macintosh environments.

Claris Em@iler provides automated e-mail management for Macintosh environments.

Apple Software

Leading Apple software products sold by Claris includes:

- Mac OS System 7.5 upgrades
- Apple Internet Connection Kit
- Apple Remote Access

Support Services

The Claris Support Portfolio offers standard product support services and advanced optional services to single users, businesses, consultants, developers, and trainers using all current Claris Macintosh and Windows products.

Basic support services available via the Internet include the following:

- Claris TechInfo, a database of thousands of articles that answer the questions customers ask most often
- Claris Solutions Guide, a database of services and solutions created specifically around Claris software applications by Claris Solutions Alliance members
- On-line forums via America Online and CompuServe

24-hour automated telephone (800) support services include the following:

- Voice AnswerLine includes prerecorded answers to the most commonly asked technical and non-technical questions.
- Fax AnswerLine sends technical and other documents to the customer's fax machine.

Users who register a Claris product receive 90 days of standard product telephone support. After the 90 days, continued support is

available through one of the following subscription services/programs:

- Subscription services include priority unlimited calls on a toll-free line, TechInfo Journal, and training product discounts.
- Claris Professional Support is priced at \$499 per year and is designed for business and educational organizations as well as professionals who support others using Claris products.
- Claris Advantage Support is priced at \$129 per year and is targeted to individual users, small business, and education users.
- The Claris Card enables users technical support under a prepayment arrangement. Priority, toll-free access service time is sold in 10-minute increments at a cost of \$19.95.
- The Claris 900 GuideLine offers live priority telephone support, with calls charged directly to the users telephone bill. The first two minutes are free; \$2 per minute is charge after the first two minutes.

The Claris Solutions Alliance was created exclusively for software professionals and publishers that provide solutions for Claris software users, including software development, training, and publishing. Under the program, members (generally third-party vendors) pay an annual subscription fee of \$249 to receive the following:

- The Claris Information Source CD, a source for evaluating all Claris software that includes trial versions of Claris products plus sample files, scripts, presentations, clip art, and product datasheets
- A free CD with full working versions of every currently shipped Claris product

- The *Claris Solutions Alliance Guide*, a database of members and a description of their products and services (also distributed to key Claris resellers and large customers) and referrals to users via phone
- Claris Plus—Claris offers large organizations (corporate and education) flexible and economic site licensing programs for products and product upgrades.
- Technical support, including: priority access to technical support experts; Claris TechInfo Library, a database of technical information compiled and used by the Claris support staff; Claris TechInfo Journal, a quarterly publication; and support via America Online and CompuServe, including access to a private discussion area
- A password-protected area on the Claris Web site specifically for members
- Significant discounts on Claris software (for personal use and training only)

Claris Technical Training Seminars in the U.S. are \$1,700 per attendee per four-day session or \$900 per two-day session.

Marketing and Sales

Claris sells its products through:

- Internet resellers, including Egghead, software.net, Cyberian Outpost, NECX Direct, Internet Shopping Network, and RCSnet Superstore
- More than 2,500 local resellers/distributors in the U.S., Canada, and 40 other countries
- Direct sales

Claris has established Web sites in the U.S., Belgium, the Netherlands, Australia, New

Zealand, and Japan from which potential customers may find information and support for Claris products, including ordering information.

Alliances

Claris has OEM agreements with various vendors for its ClarisWorks Windows and Windows products.

Claris also has more than 1,500 members worldwide of its Claris Solutions Alliance.

Competition

Claris' primary competitor for both Macintosh- and Windows-based products is Microsoft.

Assessment

Claris considers its strengths to include:

- Usability and customer satisfaction with products
- Leadership in solutions for mainstream users
- A loyal and large customer base in small business and K-12 educational institutions
- Strong cross-platform solutions
- Strong Internet product strategy

Claris' key challenge is dealing with strong competition in its software application categories.

Parent Company

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014-2084
(408) 996-1010

CLARIS CORPORATION

5201 Patrick Henry Drive
Box 58168
Santa Clara, CA 95052-8168
Phone: (408) 987-7000
Fax: (408) 987-7440

President and CEO:	Daniel L. Eilers
Status:	Subsidiary
Parent:	Apple Computer, Inc.
Total Employees:	625 (11/93)
Total Revenue:	\$154,400,000
Fiscal Year End:	9/30/93

Key Points

- Claris management attributes the company's success to its decision to focus on key cross-platform applications for the Macintosh and Windows environments.
- The company is focusing on three proprietary product areas--graphics, integrated, and database products--and publishing software from third-party developers that generally retail for under \$100.
- The Claris Graphics Engine (CGE) code base is Claris' strategic foundation for future graphics products that provides built-in intelligence to assist non-specialists and seamless cross-platform and cross-product transparency.

**Company
Description**

Claris Corporation is a leading worldwide vendor of Macintosh and Windows-based products for graphics, integrated, and database applications. Products are targeted to business, government, education, and home markets. Claris also publishes software products from independent developers through its Claris Clear Choice publishing unit.

Claris, formed in 1987, is a subsidiary of Apple Computer, Inc., headquartered in Cupertino (CA).

Strategy

Claris will continue to concentrate its business on five areas:

- Graphics
- Databases
- Integrated software
- Low-end Claris Clear Choice third-party applications
- International sales

During fiscal 1994, Claris plans to expand its applications to additional platforms, such as the Newton, PowerPC, and Windows 4.0; and focus on additional geographical areas, possibly Latin America or elsewhere in Asia.

Claris is also continuing to expand its marketing channels in areas such as telesales, OEMs for its Windows offerings, catalogs, superstores, CD ROM and on-line distribution.

Claris CAD design and drafting software for the Macintosh will be officially withdrawn from the market October 1, 1993. Claris will continue to offer full technical support for Claris CAD for one year, through September 30, 1994.

- Claris decided to move out of the CAD software category, a niche market of specialized users, to focus on cross-platform software for novice to generalist computer users.
- Under an arrangement with Ashlar Inc., Claris CAD owners are being offered an inexpensive upgrade to the Ashlar Vellum 2D or Ashlar Vellum 3D products for the Macintosh or Windows.

Effective October 1, 1993, AppleWorks 3.0 and AppleWorks GS integrated software for the Apple II and Apple II GS family of computers, will be developed, marketed, sold and supported by Quality Computers.

Financials

Claris' fiscal 1993 revenue reached \$154.4 million, a 48% increase over fiscal 1992 revenue of \$104.3 million. A five-year revenue summary follows:

**CLARIS CORPORATION
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	9/93	9/92	9/91	9/90	9/89
Revenue	\$154.4	\$104.3	\$86.0	\$65.0	\$68.0

Claris management states that the company is on track with plans to continue to grow the business 35% to 40% per year. Growth is attributed to the company's successful decision to develop cross-platform applications, resulting in significant sales of Windows versions of its FileMaker and ClarisWorks products.

**Market
Financials**

Claris' revenue is derived from novice to generalized computer users in a range of industries.

One hundred percent of revenue is derived from its software products. A further breakdown of revenue for fiscal 1993 by product line is estimated as follows:

Graphics products	25%
Integrated products	30%
Database products	30%
Claris Clear Choice	5%
Other	<u>10%</u>
	100%

During fiscal 1993, Claris' primary revenue contributors were MacDraw, FileMaker and ClarisWorks.

For fiscal 1993, approximately 80% of revenue was from Macintosh-based products and 20% from Windows-based products.

**Geographic
Markets**

Approximately 57% of Claris' revenue is derived from the U.S. and 43% from international sources.

Claris is headquartered in Santa Clara (CA) and has about 15 sales offices nationwide.

International subsidiary offices (generally staffed with sales and marketing personnel) are in France, Germany (2), Italy, Sweden, the U.K., Canada, Japan and Australia.

Key Products and Services

Claris currently offers proprietary software products for graphics, integrated, and database applications and third-party products through Claris Clear Choice.

Graphics Products:

In July 1993, Claris announced a new Macintosh and Windows cross-platform graphics strategy built on the new Claris Graphics Engine (CGE) code base that provides built-in intelligence to assist non-specialists and seamless cross-platform and cross-product transparency. Claris also announced two new applications designed for business and generalist users as follows:

- ClarisImpact for Macintosh and Windows establishes a new category of business productivity software by integrating the process of creating, editing, and communicating business graphics with reports and presentations into one application. The product automatically creates business graphics such as organizational charts, flow charts, data charts and tables, outlines, calendars and timelines.
- ClarisImpact for the Macintosh will be available in January 1994 at a suggested U.S. retail price of \$399.
- ClarisImpact for Windows is scheduled for availability the summer of 1994 and will have a suggested U.S. retail price of \$399.
- ClarisDraw is the next generation of the MacDraw product line and is designed for generalist users. The product incorporates 75 new features, including tools for creating freeform art, technical diagrams, forms, flyers, banners, space plans and simple brochures.
- ClarisDraw is compatible with MacDraw II and MacDraw Pro files and data.
- ClarisDraw for the Macintosh is scheduled for availability the first quarter of 1994 and will have a suggested U.S. retail price of \$399.
- ClarisDraw for Windows is scheduled for availability the summer of 1994 and will have a suggested U.S. retail price of \$399.

MacPaint is a free-form graphics tool for the Macintosh. This painting product is targeted to home users, artists and designers, and business professionals. The current version, MacPaint 2.0, has a suggested U.S. retail price of \$125.

Database and Integrated Products:

FileMaker Pro 2.1 is an end-user cross-platform database manager. Versions are available for Windows and the Macintosh.

ClarisWorks is an integrated word processing, graphics, spreadsheet, charting, database, and communications package. The product is targeted to business, education and home markets.

- ClarisWorks for Macintosh has a suggested U.S. retail price of \$299.
- ClarisWorks for Windows has a suggested U.S. retail price of \$249. Claris has announced an agreement to bundle ClarisWorks for Windows with Compaq's new Presario desktop computers across Europe, the Middle East and Africa.
- Users who purchase ClarisWorks prior to January 31, 1994, will receive Quicken (Intuit's personal finance program) at no extra charge.

MacProject Pro 1.5 is a project management software product targeted to corporate project managers working within mixed PC and Macintosh environments. It provides project import/export and AppleScript support. The suggested U.S. retail price is \$599.

MacWrite Pro is a word processing product for the Macintosh that combines text, graphics, charts and sound. The current version (MacWrite Pro 1.5) fully supports Apple's System 7 Pro operating system and has a suggested U.S. retail price of \$249.

Claris Clear Choice:

Claris Clear Choice currently offers five software products from independent developers, each with a suggested U.S. retail price of under \$100, as follows:

- BrushStrokes, color painting and image enhancement software
- Retrieve It!, a file finding and launching utility
- Power To Go, a utilities package for the PowerBook

- From Alice to Ocean, an interactive multimedia photojournalistic essay and CD ROM title
- Imaginaria, a screen saver

Support Services:

The Claris Support Portfolio offers basic services and advanced optional services to single users, businesses of all sizes, consultants, developers and trainers using all current Claris Macintosh and Windows products and Claris Clear Choice products.

Basic support services are provided at no charge and include the following:

- 24-Hour Automated Support:
 - Voice AnswerLine: pre-recorded answers to most commonly asked technical and non-technical questions
 - Fax AnswerLine: Technical documents and other information sent to the customer's fax machine
- 24-Hour On-line Services:
 - America Online and CompuServe forums
 - AppleLink: Product information folders, technical support message boards, etc.
 - Claris BBS: Downloadable technical notes and technical message boards for Claris applications
- Live Phone Assistance: Technical support and access to Claris product update notices available to registered users only

Under the Claris Solutions Alliance program, members (generally third-party vendors) pay an annual subscription fee of \$249 to receive the following:

- The Claris Solutions Alliance Directory, a listing of members and a description of their products and services (also distributed to key Claris resellers and customers) and referrals to users via phone
- Participation in co-marketing events at various regional and national major Macintosh, PC, and vertical market trade shows
- Priority toll-free technical phone assistance on Claris products

- On-line technical support via America Online
- 75% discount on Claris software (for personal use only)
- Newsletters and current technical information (hard copy and disk)

Claris 900 GuideLine offers live priority telephone support in the U.S. during standard operating hours. The first minute is free; \$2 per minute after first minute.

Claris Technical Training Seminars in the U.S. are \$1,700 per attendee per four-day session or \$900 per two-day session.

In August 1993, Claris expanded its support service offerings for its Macintosh and Windows products with three optional subscription technical support services for individual users and small to large businesses in the U.S. and Canada, effective September 1, 1993.

- Claris Help Desk, priced at \$3,999 a year and aimed at large corporate sites, includes priority toll-free tech support, access to a technical information library and on-line support. It also includes beta programs and technical support training.
- Claris Professional Support, priced at \$499 per year and targeted to small and medium companies, offers similar services to Help Desk but does not include beta programs and technical support training.
- Claris Advantage, priced at \$129 per year and targeted to individual users, offers toll-free support and on-line support.
- In addition, each program entitles subscribers to discounts on third-party training products on Claris software.

Marketing and Sales

U.S. distributors of Claris' products include Merisel and Ingram Micro.

Outside the U.S., Claris' products are marketed in more than 50 countries through distributors.

Alliances

Claris has OEM agreements with various vendors for its ClarisWorks Windows product, including IBM, Compaq and Toshiba.

Claris also has over 100 members of its Claris Solutions Alliance program.

Competitors

Claris' primary competitors for Macintosh-based products is Microsoft.

Primary competitors for Windows-based products include Microsoft and Software Publishing.

COMPANY PROFILE

C.M. COMPUTERS, INC.

15220 32nd Avenue, South
Suite B
Seattle, WA 98188
(206) 241-1199

George W. Masterson, President
Private Company
Total Employees: 22
Total Revenue, Fiscal Year End
6/30/91: \$1,500,000

After May 1, 1992:
530 Industrial Drive
Tukwilla, WA 98188
(206) 575-3004

The Company

C.M. Computers, Inc., founded in 1978, provides turnkey systems, application software products, and professional services to medical and dental practices.

Key Products and Services

Approximately 90% of C.M. Computers' fiscal 1991 revenue was derived from turnkey systems (hardware and software combined), 5% from application software, and 5% from customization professional services.

C.M. Computers' principal product is Medical System for Professionals (MSFP).

- The product is targeted to medical practices and is available as an IBM microcomputer-based turnkey system or as a software product. MSFP supports a networked configuration with multiple users or a multi-tasking configuration with a single CPU interfacing with multiple "dumb" terminals.
- The product supports three different operating systems--DOS, SuperDOS, and UNIX.
- MSFP applications include accounts receivable, management reporting, electronic insurance processing, credit management, collection letters, hospital processing, prescription processing, and medical records.
- Turnkey system prices range from \$11,500 to \$40,000. There are currently over 200 systems installed.
- MSFP software-only pricing ranges from \$8,000 to \$15,000.

- Large clinic systems range in price from \$36,000 to \$50,000.

C.M. Computers also markets a MSFP version to dental practices. The dental version consists of many of the same applications as the medical practice version, plus a presubmitted insurance claims-processing function.

C.M. Computers provides customized versions of its software products and turnkey systems to meet the specific requirements of some of its customers.

Industry Markets

Virtually all of C.M. Computers' revenue is derived from medical practices. The company derives a small percent of revenue from dental practices.

Geographic Markets

One hundred percent of C.M. Computers' revenue is derived from the U.S.

The majority of revenue is derived from direct sales in Washington, Oregon, California, Illinois, Montana, Nebraska, Georgia, and Hawaii. C.M. Computers' products are also sold through distributors.

COMPANY BRIEF

Primary Industry-Specific Market: Medical

C. M. Computers, Inc.

15220 32nd Avenue, South
Suite B
Seattle, WA 98188
(206) 241-1199

CEO: George W. Masterson, President
Private Company
Founded: 1978, Incorporated: 1980

Employees: 15 (11/86)
Revenue (FYE 6/30/86): \$1,000,000*

The Company: C. M. Computers provides turnkey systems, application software products, and professional services to medical and dental practices

Sources of Revenue:

- Turnkey Systems (90%)
- Application Software (5%)
- Professional Services (5%)

Key Products and Services:

- Turnkey Systems (Utilizes IBM PCs, PC/XTs, PC/ATs, and compatibles)
 - C. M. Computers provides a turnkey system for medical practices called Medical System for Professionals (MSFP). The system includes the following applications:
 - Accounts receivable
 - Management reporting
 - Electronic insurance processing
 - Credit manager
 - Collection letters
 - Hospital processing
 - Prescription processing
 - Medical records
 - C. M. Computers also markets an MSFP version to dental practices, which comprises many of the medical practice version's functions. The system also includes a presubmitted insurance claims processing function.
- Application Software (Utilizes IBM PCs, PC/XTs, PC/ATs, and compatibles)
 - C. M. Computers also provides MSFP for medical and dental practices as application software products

*INPUT estimate

October 1986

- Professional Services
 - C. M. Computers provides customized versions of its software products and turnkey systems to meet the specific requirements of some of its customers

Target Industries:

- Medical and dental (100%)

Geographic Markets:

- U.S. (100%)
- Direct sales in the state of Washington; sell through distributors in other states

October 1986

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

December 1997

CMG — SAP Services

Contact Information:

Mr. Alex Tyler, Associate Director
CMG
Telford House
Tothill Street
London
SW1H 9NB England
Tel: 0171 233 0288

The following profile outlines the services and support offered by CMG to its clients for SAP Services.

Company Background

CMG plc is a leading European Information Technology services group. Established in 1964, CMG now operates in more than 30 countries from its bases in the U.K., the Netherlands, and Germany. The Group is listed on the London and Amsterdam Stock Exchanges.

CMG supplies systems development, management consultancy and advanced technology services in the finance, transport, trade & industry, energy, telecommunications and public sector. The Group also provides managed information processing services, including payroll and personnel.

CMG has grown steadily over the years with a consistent record of profit. In 1996, the company reported worldwide revenues of \$153 million – up 25% over 1995. Operating profits increased 36% from 1995 to \$17 million in 1996. 70% of revenues were generated in the Netherlands, while the UK operations accounted for 22% or \$33.5million of turnover in 1996. Around 8% of revenues are generated in Germany. CMG's strong growth in 1996 was supported by a 30% increase in the workforce to 3512 employees at year end of which 774 were based in the UK. The company continues to grow strongly and now has 3700 employees worldwide.

CMG is dedicated to helping its clients and their people become more successful through the quality of its services, staff and support systems. High employee shareholding ensures a strong commitment to the Group's long term success and hence to the success of its clients.

SAP Activities

Relationship with SAP AG

CMG entered the market for SAP services in 1992 and is today a National Logo Partner in the Netherlands and U.K and an Implementation Partner in Germany. In 1994, the company became a Global Implementation Partner for SAP Human Resources.

CMG has established SAP Centres of Excellence in Frankfurt, Rotterdam, and London. From these centres the company services clients in Europe, the U.S. and the rest of the world.

Turnover from SAP activities

In 1995, CMG had revenues from SAP services worldwide of \$3.13 million or the equivalent of 2.6% of total revenues. All SAP revenues were generated in Europe with the SAP services in the U.K. accounting for over \$900,000 or 3.1% of total U.K. turnover.

Employees

Worldwide CMG employs 75 SAP specialists of which 20 are based in the U.K. The following table illustrates the skill sets of CMG's worldwide SAP professional staff.

CMG's Worldwide SAP Skills:

Business Consultants	75
Project Directors	8
Project Managers	20
Application Consultants	75
Basis Consultants	4
ABAP Developers	30
Total SAP Employees	75

Services

CMG offers consultancy and implementation services in the SAP market with special focus on Human Resources and Payroll.

CMG normally follows a prototyping approach when developing SAP systems, thereby defining the core design of the system which will be rolled out over the different sites or countries. The core design will encompass features such as common data definitions and functionality requirements. Next step is usually to select a pilot-site to validate the core design, which will then be refined and prototyped for the site's specific needs.

The backbone of CMG's project methodology is the company's CMG: COMMANDER Quality Management Systems. CMG:COMMANDER provides practical procedures and methods, supporting all CMG's services across the world. This common reference ensures that customers can always expect homogenous quality and documentation whenever they employ CMG's services.

From the base of CMG:COMMANDER, CMG has developed consultancy services

that are directly client orientated, such as project management, strategy for managed services, and strategy for quality management.

Industry Knowledge And References

CMG has provided HR and Payroll systems, services and advice to over 1,000 blue chip clients worldwide, spread over all market sectors. However, the company has specific

SAP skills and expertise in the following vertical markets:

Manufacturing
Finance
Transport, and
Telecommunications.

Exhibit 1 shows CMG's SAP revenues in the U.K. by vertical market sectors.

Exhibit 1

SAP Activity By Revenue And Vertical Market

Vertical Market	Sub-segment	% of Revenue
Finance	Banking, Insurance Building Societies Investment Management	8%
Communications	Telecommunications, Media	8%
Transport	Airlines, Rail, etc.	15%
Discrete Manufacturing	Automotive, Aerospace, Electrical & Electronic, Mechanical Engineering, etc.	38%
Process Manufacturing	Food and Drink Pharmaceuticals Chemicals, etc.	31%

Source: CMG

Exhibit 2

Selected Customer Projects

Customer	Industry	Project Details
An international semiconductor company/ Global	Discrete Manufacturing	International R/3 HR implementation project
An international confectionery company/ UK & Europe	Process Manufacturing	R/3 HR implementation project
A major oil company/ Netherlands	Process Manufacturing	Projects in both R/2 and R/3 Financials and Logistics
A major finance house/ Netherlands	Finance	R/3 HR implementation

Source: CMG

Exhibit 3

Vertical Market Involvement

Vertical	SAP Consulting	SAP Implementaion
Finance	Medium	Medium
Retail	Low	Low
Utilities	Low	Low
Communications	Medium	High
Transport	Medium	High
Business Services	Low	Low
Discrete Manufacturing	High	High
Process Manufacturing	High	High

Source: CMG

CMG's expertise is especially strong in the SAP HR market. The company further has in-depth knowledge of the manufacturing sector which is where CMG has the highest involvement in consulting projects as illustrated in Exhibit 3 on the preceding page.

CMG's reference customers in the SAP market include:

- Fina Plc, U.K.
- S&A Lesme-Callebaut, U.K.
- Ericsson Telecommunications, the Netherlands
- Molex Inc., U.S.

Strategic Positioning

Special Strengths

CMG has over the last 30 years grown its business in a stable, profitable manner.

In 1992, CMG was one of the first management consultancies to receive BS 5750/ ISO 9001 accreditation. An important factor in achieving this certification was CMG's development of the CMG:COMMANDER Quality Management System.

CMG considers its skills in development, following the prototyping approach, to be one of its strengths in the market, especially on U.K. and Netherlands Payroll modules. The company's history of successful multinational implementations and broad knowledge base are further strong areas.

Objectives

CMG will continue to strengthen its position as a global player in the SAP market by growing its international business unit. From this unit, the company provides SAP skills to the U.S. and European markets outside its three established country operations.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

December 1997

CMG — SAP Services

Contact Information:

Mr. Alex Tyler, Associate Director
CMG
Telford House
Tothill Street
London
SW1H 9NB England
Tel: 0171 233 0288

The following profile outlines the services and support offered by CMG to its clients for SAP Services.

Company Background

CMG plc is a leading European Information Technology services group. Established in 1964, CMG now operates in more than 30 countries from its bases in the U.K., the Netherlands, and Germany. The Group is listed on the London and Amsterdam Stock Exchanges.

CMG supplies systems development, management consultancy and advanced technology services in the finance, transport, trade & industry, energy, telecommunications and public sector. The Group also provides managed information processing services, including payroll and personnel.

CMG has grown steadily over the years with a consistent record of profit. In 1996, the company reported worldwide revenues of \$153 million – up 25% over 1995. Operating profits increased 36% from 1995 to \$17 million in 1996. 70% of revenues were generated in the Netherlands, while the UK operations accounted for 22% or \$33.5million of turnover in 1996. Around 8% of revenues are generated in Germany. CMG's strong growth in 1996 was supported by a 30% increase in the workforce to 3512 employees at year end of which 774 were based in the UK. The company continues to grow strongly and now has 3700 employees worldwide.

CMG is dedicated to helping its clients and their people become more successful through the quality of its services, staff and support systems. High employee shareholding ensures a strong commitment to the Group's long term success and hence to the success of its clients.

SAP Activities

Relationship with SAP AG

CMG entered the market for SAP services in 1992 and is today a National Logo Partner in the Netherlands and U.K and an Implementation Partner in Germany. In 1994, the company became a Global Implementation Partner for SAP Human Resources.

CMG has established SAP Centres of Excellence in Frankfurt, Rotterdam, and London. From these centres the company services clients in Europe, the U.S. and the rest of the world.

Turnover from SAP activities

In 1995, CMG had revenues from SAP services worldwide of \$3.13 million or the equivalent of 2.6% of total revenues. All SAP revenues were generated in Europe with the SAP services in the U.K. accounting for over \$900,000 or 3.1% of total U.K. turnover.

Employees

Worldwide CMG employs 75 SAP specialists of which 20 are based in the U.K. The following table illustrates the skill sets of CMG's worldwide SAP professional staff.

CMG's Worldwide SAP Skills:

Business Consultants	75
Project Directors	8
Project Managers	20
Application Consultants	75
Basis Consultants	4
ABAP Developers	30
Total SAP Employees	75

Services

CMG offers consultancy and implementation services in the SAP market with special focus on Human Resources and Payroll.

CMG normally follows a prototyping approach when developing SAP systems, thereby defining the core design of the system which will be rolled out over the different sites or countries. The core design will encompass features such as common data definitions and functionality requirements. Next step is usually to select a pilot-site to validate the core design, which will then be refined and prototyped for the site's specific needs.

The backbone of CMG's project methodology is the company's CMG: COMMANDER Quality Management Systems. CMG:COMMANDER provides practical procedures and methods, supporting all CMG's services across the world. This common reference ensures that customers can always expect homogenous quality and documentation whenever they employ CMG's services.

From the base of CMG:COMMANDER, CMG has developed consultancy services

that are directly client orientated, such as project management, strategy for managed services, and strategy for quality management.

Industry Knowledge And References

CMG has provided HR and Payroll systems, services and advice to over 1,000 blue chip clients worldwide, spread over all market sectors. However, the company has specific

SAP skills and expertise in the following vertical markets:

Manufacturing
Finance
Transport, and
Telecommunications.

Exhibit 1 shows CMG's SAP revenues in the U.K. by vertical market sectors.

Exhibit 1

SAP Activity By Revenue And Vertical Market

Vertical Market	Sub-segment	% of Revenue
Finance	Banking, Insurance Building Societies Investment Management	8%
Communications	Telecommunications, Media	8%
Transport	Airlines, Rail, etc.	15%
Discrete Manufacturing	Automotive, Aerospace, Electrical & Electronic, Mechanical Engineering, etc.	38%
Process Manufacturing	Food and Drink Pharmaceuticals Chemicals, etc.	31%

Source: CMG

Exhibit 2

Selected Customer Projects

Customer	Industry	Project Details
An international semiconductor company/ Global	Discrete Manufacturing	International R/3 HR implementation project
An international confectionery company/ UK & Europe	Process Manufacturing	R/3 HR implementation project
A major oil company/ Netherlands	Process Manufacturing	Projects in both R/2 and R/3 Financials and Logistics
A major finance house/ Netherlands	Finance	R/3 HR implementation

Source: CMG

Exhibit 3

Vertical Market Involvement

Vertical	SAP Consulting	SAP Implementaion
Finance	Medium	Medium
Retail	Low	Low
Utilities	Low	Low
Communications	Medium	High
Transport	Medium	High
Business Services	Low	Low
Discrete Manufacturing	High	High
Process Manufacturing	High	High

Source: CMG

CMG's expertise is especially strong in the SAP HR market. The company further has in-depth knowledge of the manufacturing sector which is where CMG has the highest involvement in consulting projects as illustrated in Exhibit 3 on the preceding page.

CMG's reference customers in the SAP market include:

- Fina Plc, U.K.
- S&A Lesme-Callebaut, U.K.
- Ericsson Telecommunications, the Netherlands
- Molex Inc., U.S.

Strategic Positioning

Special Strengths

CMG has over the last 30 years grown its business in a stable, profitable manner.

In 1992, CMG was one of the first management consultancies to receive BS 5750/ ISO 9001 accreditation. An important factor in achieving this certification was CMG's development of the CMG:COMMANDER Quality Management System.

CMG considers its skills in development, following the prototyping approach, to be one of its strengths in the market, especially on U.K. and Netherlands Payroll modules. The company's history of successful multinational implementations and broad knowledge base are further strong areas.

Objectives

CMG will continue to strengthen its position as a global player in the SAP market by growing its international business unit. From this unit, the company provides SAP skills to the U.S. and European markets outside its three established country operations.



FINANCIAL UPDATE TO PROFILE DATED JULY 1984

COGITO DATA SYSTEMS, INC.
1101 State Road
Princeton, NJ 08540
(609) 924-7200

Anthony J. DePaul, Chairman and CEO
Private Corporation
Total Employees: 160
Total Revenue, Fiscal Year End
10/31/85: \$11,500,000

COGITO DATA SYSTEMS FIVE-YEAR REVENUE SUMMARY (\$ thousands)

ITEM \ FISCAL YEAR	10/85	10/84	10/83	10/82	10/81
Revenue	\$ 11,500	\$ 11,000	\$ 10,300	\$ 6,387	\$ 5,746
Percent increase from previous year	5%	7%	61%	11%	2%

- Effective October 1, 1985 Cogito Data Systems sold the operations of its Petrodata® Division to ICC, Inc. of Cedar Knolls (NJ) for an undisclosed sum of cash. The division provided interactive remote computing services to retail oil firms and contributed an estimated \$3 to \$4 million to Cogito's fiscal 1985 revenue.

SOURCE OF REVENUE

- Approximately 90% (\$10.3 million) of Cogito Data Systems' fiscal 1985 revenue was derived from its various processing services and 10% (\$1.2 million) from turnkey systems.
 - Approximately 45% of revenue was derived from fleet maintenance processing services.
 - Approximately 12% of revenue was derived from batch processing services provided to schools in the U.S. and Canada.
 - Ten percent of revenue was derived from sales of the Cogito XXI turnkey system for middle and secondary school administration.
 - The remaining 33% of revenue was derived from the company's Petrodata remote computing service for oil firms. As previously mentioned, this business was divested in late fiscal 1985.
- Approximately 80% of Cogito's fiscal 1985 revenue was derived from the U.S. and 20% was Canadian.

NEW PRODUCTS AND SERVICES

- During fiscal 1985 Cogito became a value-added dealer for Burroughs. Cogito's Fleet Command System and the Cogito XXI system for school administration are now available as turnkey systems on Burroughs hardware.
- Cogito has formed a joint marketing agreement with CCG Systems, Inc. of Portsmouth (VA) to market CCG Systems' IBM-based fleet maintenance management system.
- Cogito is developing an IBM PC/AT version of its Cogito XXI turnkey system for school administration. Availability is scheduled for early 1986.

COMPANY HIGHLIGHT

COGITO DATA SYSTEMS, INC.

1101 State Road
Princeton, NJ 08540
(609) 924-7200

Anthony J. DePaul, Chairman and CEO
Philip S. Abrams, President
Private Corporation
Total Employees: 210
Total Revenue, Fiscal Year End
10/31/83: \$10,300,000

THE COMPANY

- Cogito Data Systems, Inc. was founded as Petroleum Data Corporation (Petrodata®) in 1968 to provide processing and consulting services to retail fuel oil dealers. The company changed its name in March 1983 to reflect the following acquisitions and divestiture, which were part of a strategic plan to expand business into multiple vertical marketplaces.
 - In April 1982 Cogito Corporation was acquired from Canada Systems Group Ltd. for \$250,000. Cogito, a provider of administrative processing for secondary schools and school boards in the U.S. and Canada, now operates as a wholly owned subsidiary.
 - In October 1982 the educational processing business of Sysco, Inc., located in Westwood (NJ), was acquired. Terms of the acquisition were not disclosed.
 - On November 1, 1982, Philip O. Deputy, founder of Petrodata and former chairman and CEO, formed a new company, Petroleum Software & Systems Inc. (PSSI), located in Princeton's Research Park. Mr. Deputy remains a director of Cogito Data Systems.
 - PSSI was formed with the acquisition of all of Petrodata's Series/I-based petroleum distribution turnkey product-related assets and personnel.
 - PSSI has been granted an exclusive right to market the system and will provide maintenance, support, training, and further development of the product.
 - As part of the acquisition, PSSI also purchased the weather unit monitor (hardware sales) portion of Petrodata's business.
 - In February 1983 Mainstem Corporation, a subsidiary of PHH Group, Inc. of Hunt Valley (MD), was acquired for \$1.1 million. Mainstem provides batch processing and professional services to U.S. and Canadian organizations with large vehicle fleets (primarily to municipal governments, utilities, and some private fleet operators).

COGITO DATA SYSTEMS, INC.

- Mainstem was founded in 1965 and purchased by PHH in 1975.
- Mainstem now operates as two separate subsidiaries of Cogito Data Systems: Mainstem Corporation operates out of corporate headquarters and Mainstem Canada Ltd. operates out of Toronto, Canada.
- In April 1983 Automated Fleet Services, Inc. (AFS) of Greensboro (NC) was acquired for \$350,000. AFS provides batch processing and professional services for large vehicle fleet maintenance and management, concentrating on private companies and common carriers.
- Cogito Data Systems, as a result of its recent acquisitions and divestiture, currently provides interactive remote computing services to retail oil dealers, batch processing and professional services for fleet maintenance and management, and batch processing and turnkey systems for educational institutions.
- Fiscal 1983 revenue was \$10.3 million, a 61% increase over fiscal 1982 revenue of \$6.4 million. A five-year revenue summary follows:

COGITO DATA SYSTEMS
FIVE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM \ FISCAL YEAR	FISCAL YEAR				
	10/83	10/82	10/81	10/80	10/79
Revenue	\$10,300	\$6,387	\$5,746	\$5,614	\$6,290
• Percent increase (decrease) from previous year	61%	11%	2%	(11%)	N/A

- Cogito Data Systems is currently organized into three subsidiaries, as follows:
 - Cogito Corporation markets processing services and turnkey systems to schools and school boards. This subsidiary includes the operations of the former Sysco, Inc.
 - Mainstem Corporation provides fleet maintenance processing services in the U.S.
 - Mainstem Canada Ltd. provides fleet maintenance processing services in Canada.

COGITO DATA SYSTEMS, INC.

- In October 1983 Cogito had 210 employees. There are currently 200 employees, segmented as follows:

Marketing/sales	46
Software services/ customer support	21
Computer operations	107
General and administrative	<u>26</u>
	200

- Major competition comes from companies in the following business areas:
 - Retail oil/petroleum dealer processing: International Computer Consultants and Major Computer.
 - Fleet maintenance and management processing: Cogito management does not feel it has major competition in this area.
 - Educational processing: Westinghouse Information Services (National Computer Systems).

KEY PRODUCTS AND SERVICES

- Cogito's fiscal 1983 revenue was derived approximately as follows:

	<u>Percent of Total</u>	<u>Revenue (\$ millions)</u>
Processing services	96%	\$9.9
• Batch (70%)		
• Remote computing (30%)		
Turnkey systems	3	0.3
Hardware sales	<u>1</u>	<u>0.1</u>
	100%	\$10.3

- Approximately 50% of Cogito's fiscal 1983 revenue was derived from fleet maintenance processing services provided to over 300 clients in the U.S. and Canada.
 - Ninety percent of revenue was derived from batch processing services provided to 300 clients.
 - Fleetscan I, developed by Mainstem Corporation, has 200 clients. It permits a free-form approach to extraction of vehicle information.
 - The Vehicle Maintenance Reporting System (VMRS), developed by Automated Fleet Services, has 100 clients. Vehicle data are collected and reported according to American Trucking Association standards.

- Clients mail fleet maintenance data on each vehicle to the Cogito data center for processing. Cogito provides monthly reports to the client on vehicles, components, fuel-use analysis, labor costs and shop staffing, and quality of repairs.
- Additional reports assist in planning for vehicle replacement, routine schedules for preventive maintenance, and budget planning.
- Ten percent of revenue was derived from the Fleetscan 2 remote processing and data collection services provided to seven clients.
 - Clients are generally fleet managers with requirements for immediate access to vehicle information.
 - An NCR Criterion is installed at the client site. Data on each vehicle is available on-line.
 - Cogito's data center pulls client fleet data on a remote batch basis and generates monthly reports, which are delivered by mail.
- The company also provides consulting services to fleet management using the reports generated by Fleetscan services.
- Cogito's subsidiary, Mainstem Corporation, is developing the Fleet Command System, a turnkey system for fleet maintenance management.
 - The system will maintain a data base of information on vehicles, parts, and employee data; work orders and analysis reports; billing; and fuel usage data. Daily and periodic reporting functions will provide summary information.
 - Based on the Convergent Technology N-Gen workstation, the first beta sites are scheduled for testing in early 1985.
- Thirty percent of Cogito's fiscal 1983 revenue was derived from Petrodata®, an interactive remote computing service provided to 200 retail oil firms delivering fuel to more than 450,000 retail accounts. Over 400 applications programs are offered as part of the following systems:
 - Degree Day/Delivery Scheduling, a dispatching system for petroleum distributors, provides computer-scheduled deliveries to minimize the number of delivery calls a dealer must make. The system establishes credit limits for each customer and automatically posts deliveries, sales, adjustments, and payments.
 - The Burner Service System (a billing, dispatching, and accounting system for home heating oil distributors) provides reports on service-persons' performance, problem service accounts, and repeat calls.

COGITO DATA SYSTEMS, INC.

- Accounts Receivable.
- Fueloil Financial Accounting Systems provide general ledger, accounts payable, and fixed assets applications.
- Approximately 17% of fiscal 1983 revenue was derived from batch processing services provided to over 450 schools in the U.S. and Canada.
 - The batch scheduling service is available for attendance, competency recordkeeping, grade reporting, guidance, and master scheduling.
- Three percent of fiscal 1983 revenue was derived from sales of the Cogito XXI turnkey system for middle and secondary school administration.
 - The system handles all student and teacher records, attendance, grade reporting, and teacher scheduling. All school documents can be printed in-house.
 - The system is based on the Convergent Technology microprocessor (running under CTOS) and is priced from \$34,500.
 - There are currently four Cogito XXI beta site installations on the East Coast and seven additional client installations. The company markets the system throughout North America.
- Cogito derived a small amount of fiscal 1983 revenue (\$100,000) from the sale of Sycor, Harris, and Racal-Milgo CRTs, printers, modems, microfiche readers, and other hardware products related to Cogito's remote computing services.

INDUSTRY MARKETS

- Cogito's fiscal 1983 revenue was derived as follows:

Fleet maintenance (includes common carriers, municipalities, distributors, utilities, etc.)	50%
Petroleum distribution	30
Education	<u>20</u>
	100%

GEOGRAPHIC MARKETS

- Approximately 80% of Cogito's fiscal 1983 revenue was derived from the U.S. and 20% was Canadian.
- Branch offices are located in Mountain View (CA) and Toronto, Canada.

COMPUTER HARDWARE AND SOFTWARE

- Cogito maintains the following equipment at its Princeton headquarters:
 - 1 Amdahl 470 V/6, MVS.
 - 1 Amdahl 470 V/5, EDOS.
 - 1 NCR Criterion.
- Clients access Cogito's network via leased lines.

Thomas Evans, Controller

COMPANY HIGHLIGHT

COGNA SYSTEMS CORPORATION
222 North Dearborn Street
Chicago, IL 60601
(312) 431-6700

has resigned, no replacement 11/22/77
~~David J. Eskra~~, President
Wholly owned subsidiary of GSI, Inc.
Total employees: 150
Total sales, fiscal year end
10/31/76: \$7,200,000

THE COMPANY

- Cogna Systems Corporation was founded in October 1972 as a subsidiary of GSI, a subsidiary of Esmark Corporation. In February 1977, GSI and its subsidiaries were sold to a group of private investors. GSI is a holding company comprising four insurance agencies, a real estate agency, a design engineering firm, and Cogna.
- Cogna offers general business services in batch and remote batch modes of operation, professional services, and software products.
- Esmark companies, still Cogna's largest users, produced 70% of sales in fiscal 1976 down from 95% in fiscal 1975. Esmark will remain the largest user through 1980, but will represent a continuously smaller share of sales as Cogna places increasing emphasis on marketing to non-captive users. Non-captive, new account activity, currently generates 30% of Cogna total sales

KEY PRODUCTS AND SERVICES

- Batch processing and remote computing (remote batch) services currently produce 41% and 34% of total Cogna sales respectively and serve a total of 25 users. The other 25% comes from professional services (contract programming and consulting) and software products, with a total of 80 clients.
- The key software product is Smites, a corporate tax management system. The system permits hardcopy or online data entry and prepares Federal tax, state income/franchise, municipal, and other returns.
- Cogna also offers other vendor software products on its system, including: LIFE 70, RAMIS, CICS, TSO.

APPLICATIONS Cogna offers utility and general business services. The general business services have tax applications.

COMPANY HIGHLIGHT/COGNA SYSTEMS CORPORATION

INDUSTRY MARKETS

- The process and discrete manufacturing industries generate 69% of total sales; the insurance industry the other 31%. Clients include Esmark subsidiaries such as Swift & Company, Estech, ^{and} Globe Life Insurance, as well as E.I. DuPont de Nemours & Company, Harris Corporation, McDonald's Corporation, and Republic Steel.
- Of this total, 70% is captive and 30% merchant. The non-captive new accounts are about 85% manufacturing concerns and 15% all other industries.

GEOGRAPHIC MARKETS

- Cogna customers are concentrated in the North Central states, primarily around Chicago. The company is concentrating marketing efforts around Chicago, Milwaukee, and New York.
- Branch offices are located in Chicago and New York. A Milwaukee branch office was opened in 1977. New branches will be opened within a 300 mile radius of Chicago.

COMPUTER HARDWARE AND SOFTWARE The company uses an IBM System/370-158 *attached processor* running under OS/MVS in Chicago for its processing services. An IBM 3032 processor is on order.

David J. Eskra
President

copy to Mr. per Nov. 28 1977
**cogna
systems**

Cogna Systems Corporation

222 North Dearborn Street
Chicago, Illinois 60601
Telephone 312 431 6701

November 22, 1977

Ms. Caroline M. Wood
Manager, Company Analysis
Input
2180 Sand Hill Road
Suite 320
Menlo Park, California 94025

Dear Ms. Wood:

I have made corrections on the Company Highlight sheet which you sent me. I am returning it to you for your review.

In response to your questions on our downturn in revenues, in 1975 our revenues were correctly listed - approximately \$8,000,000. In 1976 our revenues declined to \$7,200,000. The reason for the decline related specifically to downturns at our parent company. The predominance of this downturn in business fell into the computing center and into our systems development business. One of the major reasons for Cognia's move to a more diversified customer base was to protect against this dedication to a one client base.

I have decided to leave Cognia Systems, therefore I believe that you would want to change your highlight in terms of who would be the contact point. At this point in time, no successor has been named, and I think any future correspondence should be directed to Thomas Evans, who is currently the Controller of Cognia Systems.

If you have any questions, please feel free to contact Tom.

Sincerely

David J. Eskra
David J. Eskra

DJE/bd
encl.

cc: T. E. Evans



COMPANY HIGHLIGHT

COGNA SYSTEMS CORPORATION
222 North Dearborn
Chicago, Illinois 60601
(312) 431-6700

David J. Eskra, President
Wholly owned subsidiary of
Esmark Corporation
Total company and computer services
sales as of FY ending 10/75:
\$8,000,000

NUMBER OF EMPLOYEES engaged in computer services: 172

KEY PRODUCTS/SERVICES: CSC provides mostly batch services, which represent half of its annual sales. In addition, software (professional) services account for 32% of sales and facilities management for 10%. Remote computing and software products account for the remainder of sales. The key product marketed, outside the Esmark family, is called SMITES, a tax management system. Additional software products available through CSC include: LIFE 70, RAMIS, CICS, TSO, ATMS.

APPLICATIONS: Applications, such as the tax management system, are almost all general business oriented.

INDUSTRY MARKETS: CSC serves the manufacturing and insurance industries: mostly subsidiaries of Esmark such as Swift & Company; Playtex; GSI, Inc.: Globe Insurance. Manufacturing accounts for 69% of annual sales and insurance represents the remaining 31%.

GEOGRAPHIC MARKETS: Customers are concentrated in the North Central region of the U.S., primarily around the Chicago area. CSC is also developing the Northeastern region where it has a branch office in New York.

COMPUTER HARDWARE AND SOFTWARE:

1 IBM 370/158 OS/VS2

OVERALL ASSESSMENT AND TRENDS: Esmark companies are, by far, CSC's largest user, representing 95% of sales, all captive business. Esmark will remain the largest user through 1980, but will represent a smaller share of sales as CSC begins to place more emphasis on marketing to other firms. By assuming the role of a marketing-oriented computer services company, annual sales should reach the \$14 million range within this timeframe. Soon, Cogna will market financial accounting applications as well as tax management services to non-captive customers.



COMPANY PROFILE

COGNITIVE SYSTEMS, INC.

234 Church Street
New Haven, CT 06510
(203) 773-0726

Stephen Craig Mott, President and CEO
Public Corporation, OTC
Total Employees: 30 (1/89)
Total Revenue, Fiscal Year End
11/30/88: \$2,299,455

The Company

Cognitive Systems Inc., founded in 1979, develops, markets, and supports customized and packaged software products based on artificial intelligence for commercial applications primarily in the areas of financial services, communications, and the military. These products fall into four categories: automated message processing, front-end user interfaces to data bases and transaction systems, case-based reasoning, and automated customer service environments.

- Once a custom project is commissioned and developed, Cognitive generally provides a limited field-of-use operational license to the application, but retains the right to further develop and market the application as a product for other customers. Ultimately, Cognitive's goal is to market and license standard products, providing customer support and maintenance.

In May 1986, Cognitive obtained \$6.4 million of investment capital from an initial public offering. The funds were used for working capital, marketing expenditures, product development, and equipment.

Total fiscal 1988 revenue was \$2.3 million, a 6% decrease from 1987 revenue of \$2.4 million. Net losses were approximately \$1.6 million, compared to net losses of nearly \$3.1 million in 1987. A three-year financial summary follows:

COGNITIVE SYSTEMS, INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)

ITEM	FISCAL YEAR		
	11/88	11/87	11/86
Revenue	\$2,299	\$2,434	\$2,389
• Percent increase (decrease) from previous year	(6%)	2%	86%
Income (loss) before taxes	\$(1,551)	\$(3,078)	\$(235)
• Percent increase (decrease) from previous year	50%	*	(62%)
Net income (loss)	\$(1,551)	\$(3,078)	\$(235)
• Percent increase (decrease) from previous year	50%	*	(62%)
Earnings (loss) per share (a)	\$(0.58)	\$(1.16)	\$(0.11)
• Percent increase (decrease) from previous year	50%	*	(71%)

* Percent change exceeds 100%.

(a) Restated to reflect a 0.55- for-one reverse stock split effective March 19, 1986.

During fiscal 1987 Cognitive recognized an investment trading loss of approximately \$1.9 million as a result of the company's former Vice President of Finance and Administration, Treasurer and Chief Financial Officer entering into unauthorized and fraudulent trading of speculative securities instruments. During fiscal 1988, the former officer made restitution of approximately \$75,000 and Cognitive recognized a gain of approximately \$47,000 from that amount.

Cognitive management attributes the company's losses primarily to having hired and retained staff in expectation of a level of business the company hope to achieve in fiscal 1988 but did not obtain. Revenue was essentially flat while the process of creating and redefining new products continued and a limited number of additional new internally-specific prototypes were developed.

- Cognitive has potential commitments for customer-sponsored development work for fiscal 1989 at a revenue level

approximately equal to that achieved in fiscal 1988. If additional revenue is not achieved, Cognitive will attempt to further reduce staff and operating costs to at least break even for fiscal 1989.

- Cognitive's working capital at the end of fiscal 1988 was only \$203,000. If the company is unable to increase working capital, it may not have sufficient resources to fund continuing operations during fiscal 1989.

Cognitive current has minority interests in the following companies:

- Cognitive has a less than 20% interest in Compu-teach, Inc., an educational software company.
- Cognitive has a 40% interest in Gecosys, a joint venture company formed in mid-1986 by Cognitive, Generale Bank, and other investors.
 - Gecosys was formed to develop and market artificial intelligence software products for the overseas financial services industry.
 - Cognitive has granted to Gecosys certain marketing rights for jointly developed products and Cognitive's Automated Message Processing Services software within Europe, Africa, and the Middle East.
- Cognitive has small interest in Intelligent Business Systems (IBS), a software development firm specializing in artificial intelligence applications.

As of January 29, 1989, Cognitive had 30 full-time employees and one part-time employee, segmented as follows:

Marketing	2
Software development	23
General and administrative	<u>6</u>
	31

Cognitive competitors include Alcorp, Bolt, Beranek & Newman, Carnegie Group, Texas Instruments, Citicorp Information Resources, Sumitomo Bank, Natural Language, and several of the Big 8 accounting firms.

Key Products and Services

Approximately 94% of Cognitive's fiscal 1988 revenue was derived from development contracts with ten customers and 6% was derived from software product licenses with one customer.

Software developed by Cognitive can be run on general purpose hardware from various manufacturers, including Apple, IBM, DEC, Sun Microsystems, Texas Instruments, and Symbolics. Cognitive is currently involved in providing software in four areas as follows:

- Automated Message Processing Systems automate the processing and handling of text messages. This product area accounted for approximately 55% of fiscal 1988 revenue.
- Cognitive is currently marketing a family of message processing systems designed specifically for banks.
 - ATRANS[®] (Automatic Funds Transfer System) reads and formats unstructured money transfer telexes for automatic processing. ATRANS is marketed in the U.S. by MCI as a service to its record-carrier subscribers and by Cognitive directly to end users such as banks. There are currently six installations worldwide.
 - ACLASS[™] (Automatic Classification System), introduced in fiscal 1988, is an extension of ATRANS that identifies, classifies, and routes a variety of financial transaction messages. There are currently two installations of ACLASS.
 - Test Key Extractor[™], introduced in fiscal 1988, performs ATRANS-like processing of various types of financial transaction messages to extract specific fields of data related to coding mechanisms that authenticate these transactions.
 - Repair Station, scheduled for availability in 1989, provides manual revision or updating of the messages processed by ATRANS.
- Cognitive has software development contracts with Union Bank of Switzerland to automate the completion or repair of SWIFT messages and with The Chase Manhattan Bank for the handling of letters of credit messages.
- Cognitive has developed prototypes of several specialized interfaces to both institutional and consumer data bases using natural language processing and other user-friendly

technologies. The prototypes are intended to become standardized products that can be marketed to other customers. This product area contributed approximately 28% to fiscal 1988 revenue.

- Initial prototypes have focused on the financial services sector, including a retail banking customer self-service program originally developed for Citibank.
- During fiscal 1988, Cognitive began work on an institutional data base front-end project with Nation 1 Computer Systems that is designed to permit trust fund managers to perform detailed queries and analyses with financial data bases using natural language input and to receive standard English text and explanations.
- Case-Based Reasoning systems began in fiscal 1987 as a research prototype funded by Cognitive with the objective of providing an alternative to rule-based expert systems for automated decision support. This product area contributed over 15% to fiscal 1988 revenue.
- During fiscal 1988, Cognitive received a one-year contract with the Defense Advanced Research Projects Agency (DARPA) to expand this prototype into specific tools that could be used in the military domain. DARPA has the option to extend the contract for a second and third year.
- Several development initiatives pursued by Cognitive are designed to help automate the customer service function of companies. This product area contributed less than 1% to fiscal 1988 revenue.
- During fiscal 1987, Cognitive developed a training prototype for DARPA that employed Socratic methods of dialogue interaction between students and the computer program. At least two financial services companies have expressed continuing interest in commercial development, and Cognitive is searching for an appropriate partner to fund further development.
- Cognitive had developed a prototype for automated, personalized letter writing. Cognitive expects to conclude one or more contracts during fiscal 1989 to develop this prototype further in the hopes of generating a new product line.

Industry Markets

During fiscal 1988, major clients included MCI (16% of revenue), DARPA (16% of revenue), Citibank (14% of revenue), Union Bank of Switzerland (13% of revenue), IBM (12% of revenue), and Generale Bank (10% of revenue).

During fiscal 1987, major clients included Citibank (52% of revenue), Generale Bank (17% of revenue), and Union Bank of Switzerland (10% of revenue).

Geographic Markets

Approximately 71% of Cognitive's fiscal 1988 revenue was derived from the U.S. and 29% from international sources.

Computer Hardware and Software

Cognitive currently has the following hardware installed for development purposes:

- 2 DEC VAX 11/785, operating under VMS
- 25 Macintosh IIs
- 2 Symbolics 36/20, operating under GENERA

COMPANY HIGHLIGHT

COGNITIVE SYSTEMS, INC.

234 Church Street
New Haven, CT 06510
(203) 773-0726

Dr. David Fox, President

Private Corporation

Total Employees: 23

Total Revenue, Fiscal Year End

11/30/84: \$1,000,000*

THE COMPANY

- Cognitive Systems Inc. was founded in 1979 by Dr. Roger Schank to develop expert systems capable of understanding natural language input. The company currently develops custom expert systems, natural language end-user interfaces, and natural language telex interfaces. In addition, the company sells T, an artificial intelligence programming language (a dialect of LISP). Dr. Schank holds positions at Yale as the Chairman of the Computer Science Department and the Director of the Artificial Intelligence Lab.

- In March 1984 Cognitive obtained \$2.8 million of investment capital from a private placement offering. The funds were used for working capital, product development, and equipment acquisition.

- Cognitive's 23 employees are segmented as follows:

Marketing/sales	3
Software services/customer support	1
Research and development	14
General and administrative	<u>5</u>
	23

- Cognitive competes in two distinct markets that have emerged from artificial intelligence research.
 - Natural language interfaces developed by Cognitive compete with Artificial Intelligence Corporation's Intellect installed base of more than 250 locations.
 - Cognitive competes with IntelliCorp and Bolt, Beranek and Newman for expert systems-related professional services.

KEY PRODUCTS AND SERVICES

- Cognitive's fiscal 1984 revenues were derived as follows:

Professional services	90%
System software	<u>10</u>
	100%

*INPUT estimate

- Cognitive specializes in building expert systems that:
 - Understand natural-language input.
 - Analyze a user's request and goals.
 - Offer information relevant to the knowledge domain of the expert system.
- Some definitions relating to artificial intelligence systems follow:
 - Expert systems (referred to synonymously as knowledge-based systems) are systems that contain specialized knowledge, both factual and heuristic, and that are able to reach conclusions by applying the specialized knowledge to problems presented by the user. Programming techniques used to develop these systems are the result of research in the academic field of artificial intelligence (AI).
 - Natural Language interfaces are knowledge-based systems that specialize in the grammatical and definitional rules of written languages, thereby allowing input in the form of grammatically correct sentences such as data base queries entered at an input device. The methods used to develop these interfaces for Cognitive came from Dr. Schank's research in AI at Yale University. Similar research was done by Dr. Larry Harris of Artificial Intelligence Corporation in Waltham (MA) from 1975 to 1981 and resulted in the creation of Intellect, a natural language interface currently being marketed by Artificial Intelligence Corporation.
- Cognitive has defined three types of systems that they develop: Natural Language Front-Ends, Conversational Advisory Systems, and Automatic Processing Systems.
 - Natural Language Front-Ends are natural language interfaces that the company fits to existing data bases for end-user queries. Examples of systems in this category that the company has developed include the following:
 - EXPLORER is an English language interface to a graphics package operating on a large oil well data base.
 - DESI (under development) is a decision support system with a natural language front-end used to access the SAMI and Nielsen data bases. DESI is being developed with Dialog Information Systems of New York. Up until the fall of 1984, the system was referred to as MARKETEER.
 - EASYTALK I is an English language interface bundled with a small business system that integrates 14 standard accounting packages. Cognitive completed development of EASYTALK I in

October 1983 for Intelligent Business Systems, Inc., who markets the system.

- BROKER is a demonstration natural language front-end to Standard & Poor's COMPUSTAT. BROKER is used only as a demonstration of a natural language interface for Cognitive and is not available commercially.
- Conversational Advisory Systems are expert systems with a natural language interface used to engage the user in a dialog and offer advice about a particular area within the knowledge domain of the expert system. These systems are more sophisticated than Natural Language Front-Ends in that they produce natural language output for the user about the expert system's knowledge domain. Example systems in this category which Cognitive has developed are listed here.
 - LE COURTIER is a decision support system that will be used by financial analysts of a major Belgian bank. One version of the system contains a set of rules used by the bank's analysts in advising customers on stock purchases and allows for each financial analyst to input his own personalized investment rules. In a second version of the system the bank's customer can modify the advice given by the system by stating personal preferences in conversational English. (Subsequent versions of the system will include French and Flemish.) A joint marketing arrangement is under negotiation with the bank to distribute the system throughout Europe.
 - TRANSLATTER (under development) is a multiple-language system that generates standard business letters and creates a personalized data base for each user. TRANSLATTER is expected to be ready for distribution in 1986.
- Automatic Processing Systems are data processing systems that use a natural language interface for handling machine-readable textual inputs such as telexes. Cognitive is nearing completion of a system for the Coast Guard that reads telexes announcing the location and sail plan of ships. The system processes the unformatted telexes and updates the Coast Guard's AMVER data base.
- Cognitive's system software sales are derived exclusively from software licenses for T, a dialect of LISP developed at Yale University. All of Cognitive's custom systems are written in T, which currently runs on Apollo computers and on the DEC VAX under both UNIX and VMS.

INDUSTRY MARKETS

- Cognitive derived its fiscal 1984 revenue from the following industry sectors:

Banking and finance	45%
Wholesale distribution	30
Federal government	20
Other	<u>5</u>
	100%

GEOGRAPHIC MARKETS

- Cognitive's fiscal 1984 revenue was derived from the following geographic segments:

U.S.	60%
Europe	<u>40</u>
	100%

COMPUTER HARDWARE AND SOFTWARE

- The company currently has the following hardware installed for development purposes:
 - 1 Apollo 460, operating under AEGIS.
 - 2 Apollo 420s, operating under AEGIS.
 - 12 Apollo 300s, operating under AEGIS.
 - 3 DEC PDP 11/785s, operating under UNIX and VMS.

COGNOS INCORPORATED

3755 Riverside Drive
Ottawa, Ontario K1G 3Z4
Phone: (800) 267-2777
(613) 738-1440
Fax: (613) 738-0002

67 South Bedford Street
Suite 100E
Burlington, MA
Phone: (800) 426-4667
(617) 229-6600
Fax: (617) 229-9828

President & COO: Ron Zambonini
Status: Public
Total Employees: 1000
Total Revenue: \$147,668,000
(Canadian)
Fiscal Year End: 2/28/93

Key Points

- Fiscal 1993 was a pivotal year for Cognos. Although overall financial performance was weak, Cognos introduced new products as well as implemented cost reduction measures.
- In 1992, to support its strategic shift to open systems, Cognos shipped products for the AS/400 and added UNIX offerings for Digital Equipment, IBM, Sun Microsystems, in addition to its existing Hewlett-Packard offerings.
- In 1992, Cognos shipped its first client/server implementation for Windows clients.
- Cognos redesigned the CASE product Powerhouse CASE and changed its name to PowerDesigner. The redesign was aimed at increasing performance and at enabling better integration with tools from other vendors.

**Company
Description**

Cognos Incorporated develops, markets, and supports application development and data management software products. The company's primary product is the PowerHouse[®] 4GL application development language.

- Cognos was founded in 1969 as a software consulting firm and began marketing packaged software products in 1979. Its original product, a report writer for the HP 3000 minicomputer, evolved into the application development language now called PowerHouse 4GL.
- Cognos' common stock is traded in the U.S. on the NASDAQ National Market System. In Canada, the company's stock is traded on the Toronto Stock Exchange.

Strategy

Cognos' current strategy is to offer an integrated family of application development tools that support the entire application development cycle for midrange and microcomputing environments.

In addition to the company's 4GL product, PowerHouse[®], Cognos has added a full suite of software tools and services designed to enable companies to create mission-critical business applications.

Cognos Inc.'s (Cognos) focus on delivering software for midrange systems allowed the company to build a healthy client base through the 1980s.

Cognos began a difficult strategic and tactical transition in 1989, positioning its software products to operate in computing environments with increasing growth rates in the 1990's.

In 1992, to support this strategic shift, Cognos shipped products for the AS/400 and added UNIX offerings for Digital Equipment, IBM, Sun Microsystems, in addition to its existing Hewlett-Packard offerings.

This strategy's success was confirmed by fiscal 1993 revenue growth. In the more mature markets of application software tools for proprietary Hewlett-Packard MPE/iX and Digital VAX, markets grew at about 5% each. However, revenue from the Unix market grew by 83% and revenue from the AS/400 market was up by 48%.

**Operations/
Structure**

Cognos is an international, publicly owned company with shares traded in Canada on the Toronto Stock Exchange under the symbol CSN and in the U.S. on NASDAQ under the symbol COGNF.

In 1990, the company reported losses in the first three quarters. However, Cognos restructured its operations by reducing the workforce by approximately 200 employees, reorganizing senior management, making changes sales and marketing organizations in order to improve sales effectiveness. In addition, Cognos management focused research and development efforts on the enhancement of existing products, on development of complementary new products and services, and on the consolidation of certain facilities and asset write-offs.

- The restructuring resulted in nonrecurring charges of \$4.7 million to fiscal 1990 income.

Cognos headquarters operate from two locations. The research and development and finance and administration organizations are located in Ottawa, Ontario, Canada. The company's worldwide marketing and sales operations are managed from its facility in Burlington (MA).

International subsidiaries are located in the U.K, Australia, Belgium, France, Germany, Hong Kong, Japan, Mexico, Norway, Singapore, Spain, Sweden.

Cognos also sells its products internationally through independent distributors in markets not served exclusively by Cognos' direct sales force.

Financials

Cognos' fiscal 1993 revenue reached \$147.6 million, a 2% increase over fiscal 1992 revenue of \$145.1 million. Net loss and loss per share were \$7.9 million and \$0.62 compared to 1992 net income and earnings of \$5.2 million and \$0.43. In the four-year summary that follows, financials are expressed in Canadian dollars.

**COGNOS INCORPORATED
FIVE-YEAR FINANCIAL SUMMARY**
(\$ millions Canadian, except per share data)

ITEM	FISCAL YEAR				
	2/93	2/92	2/91	2/90	2/89
Revenue	147.6	145.2	\$141.2	\$112.5	\$102.7
• Percent increase (decrease) from previous year (a)	2%	3%	25%	21%	
Gross Research and Development Expenditures	\$20.1	\$17.9	\$16.1	\$17.7	\$14.3
Income (loss) before taxes	(\$6.0)	\$7.7	\$7.0	\$(17.1)	\$6.1
Net Income (loss)	\$(7.9)	\$5.2	\$3.8	\$(19.6)	\$1.8
• Percent increase (decrease) from previous year	(152%)	37%	139%	(371%)	
Earnings (loss) per share	\$(0.62)	\$0.43	\$0.36	\$(1.88)	\$0.18
• Percent increase (decrease) from previous year	(152%)	19%	138%	(365%)	

(a) Includes restructuring charges of \$4.7 million.

During fiscal 1990, Cognos sold all rights associated with its applications products (Multiview and PowerPlan) to a newly formed company, Multiview Inc., which is owned by former Cognos employees. Combined, the two products contributed 3% to total Cognos revenue for each of the fiscal years 1989 and 1990.

In April 1991, Cognos made a public offering of 2.06 million shares of its common stock, of which 1.5 million shares were sold by the company and 563,000 million by selling shareholders. Estimated net proceeds to the company will be \$23.1 million

In the third and fourth quarters of fiscal 1993, Cognos recorded restructuring charges of \$3.1 million and \$0.9 million respectively, representing the costs associated with restructuring the company's operations.

Revenue increases were supported by revenue from new products introduced in late fiscal 1992 and in fiscal 1993. The new products included end-user reporting tools (PowerPlay, InQuizitive, and QuizPlus), PowerCASE, versions of PowerHouse for the IBM AS/400 and for certain UNIX platforms, expanded data base support for Cognos impromptu SQL query tool, as well as expanded LAN and Windows 3.1 support for PowerPlay, and new versions of the client/server reporting products.

Competition

PowerHouse competitors, by hardware market, include the following:

- HP market: HP and Infocenter Ltd.
- DEC market: DEC, Information Builders, Cincom Systems, and Oracle
- IBM AS/400 market: Synon and Lansa

Key Products and Services

Approximately 53% of Cognos' fiscal 1993 revenue was derived from software product licenses, 32% from product support, and 15% from education and product consulting services. A three-year summary of source of revenue follows:

**COGNOS INCORPORATED
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions, Canadian)**

ITEM	FISCAL YEAR					
	2/93		2/92		2/91	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$71.0	48%	\$75.1	52%	\$74.7	53%
Product support	59.1	40%	\$50.2	34%	45.7	30%
Education and consulting	\$17.5	12%	\$19.8	14%	20.7	15%
TOTAL	147.6	100%	\$145.1	100%	\$141.1	100%

Cognos' integrated family of software tools supports all phases of the application development cycle, including analysis and design, construction, end-user reporting, maintenance, and data management functions.

- Cognos' core product, PowerHouse, is an advanced application development language. The company's other products complement PowerHouse and are generally licensed only by existing PowerHouse users or in connection with the licensing of PowerHouse.
- Since 1981, Cognos has licensed PowerHouse for use on more than 18,000 midrange computers.

PowerHouse incorporates a powerful instruction set and data dictionary.

- PowerHouse also features QUICK[®], a screen, menu, and form generator; QUIZ[®], a report generator designed for read-only data base access; and QTP, a special facility for data manipulation and batch processing tasks.
- PowerHouse 4GL operates on DEC VAX/VMS and RISC/ULTRIX systems; HP 3000-900 (MPE-XL), HP 9000-800 (HP-UX), and HP 3000 MPE-V systems; Data General ECLIPSE MV and AViiON computers; and IBM AS/400 and RS/6000 systems.
- PowerHouse PC allows users to develop programs on a personal computer running under MS-DOS or OS/2, and to execute those programs on the PC or transfer them to supported midrange platforms.
- A version of PowerHouse supporting the client/server model is under development. Initial release on HP MPE systems is scheduled for the end of calendar 1991.

PowerDesigner is Cognos' analysis and design tool. The product is currently available for DEC VAXstations under DECWindows and is fully compatible with the VAX version of PowerHouse. An OS/2 version is scheduled for availability in the first half of fiscal 1993.

PowerHouse ARCHITECT is a maintenance product that provides computer generated documentation for applications, rapid prototyping of data definition changes, and automatic analysis of the impact of those changes on specific programs. The product is currently available for HP MPE-V and MPE-XL and DEC VAX computers and is available on the IBM AS/400 and certain UNIX platforms.

Reporting tools include the following:

- PowerPlay is a management reporting and analysis tool that supports a client/server computing model. It is available for IBM PCs and a version for the Macintosh was offered during fiscal 1992.
- InQuizitive is an easy-to-use, menu-driven query-and-reporting tool for DEC VAX and HP MPE-XL systems. It is available on the IBM AS/400 and certain versions of UNIX.
- QuizPlus is an end-user report writer for HP MPE-V systems.

PowerHouse StarBase is a relational data base management system that features on-line transaction processing and distributed processing capabilities for multiuser environments.

- PowerHouse StarBase is available for DEC VAX, DEC RISC ULTRIX; HP MPE-XL and HP-UX; IBM RS/6000; and Data General AViiOn systems.

PowerHouse StarGate allows remote read-and-write access, via network communications software, to Oracle data bases on DEC VAX computers.

Cognos offers its customers full service and support through technical newsletters, telesupport, problem evaluation, seminars, and training courses. Cognos also provides consultants to assist in building application and data base design/methodology expertise.

Industry Markets

Cognos' software products are marketed to a range of small, medium, and large organizations in various industries.

Alliances

Third-party channels, which includes VARs, use Cognos tools to develop packaged software applications for sale directly to end users and distributors. The VAR pays a royalty to Cognos for each copy of Cognos software embedded within the application. As of February 28, 1993, there were approximately 200 VARs offering more than 600 applications using Cognos products.

Telesales are used to sell products and services primarily to the installed base of Cognos customers. Cognos is an HP PLUS program participant, a DEC Cooperative Marketing Program participant, an IBM Business Partner in certain geographic markets, and a Data General Independent Software Vendor. In addition, DEC and Data General are licensed to sell Cognos' products with their hardware.

Geographic Markets

A three-year summary of source of revenue, as reported by Cognos, follows:

COGNOS INCORPORATED
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
 (\$ millions, Canadian)

ITEM	FISCAL YEAR					
	2/93		2/92		2/91	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Domestic	\$18.2	12.6%	\$19.9	13.8%	\$19.3	14%
- Canada	\$0.8	0.5%	\$0.1	NA	2.7	2%
- Export						
U.S.	\$61.5	41.6%	\$63.3	43.7%	53.7	39%
Europe	\$51.3	34.7%	\$48.0	33.0%	50.4	37%
Australia & Far East	\$15.5	10.6%	\$13.6	9.5%	11.0	8%
TOTAL	147.6	100%	145.1	100%	\$137.2	100%

Cognos sells its products directly through 49 sales offices located in 13 countries.

COMPANY PROFILE

COGNOS INCORPORATED

3755 Riverside Drive
Ottawa, Ontario K1G 3Z4
(613) 738-1440

Michael U. Potter, Chairman and CEO
Jeffrey P. Papows, President and COO
Public Corporation, NASDAQ, TSE
Total Employees: 1,023 (2/91)
Total Revenue, Fiscal Year End
2/28/91: \$141,161,000 (\$ Canadian)

The Company

Cognos Incorporated develops, markets, and supports application development and data management software products. The company's primary product is the PowerHouse[®] 4GL application development language.

- Cognos was founded in 1969 as a software consulting firm and began marketing packaged software products in 1979. Its original product, a report writer for the HP 3000 minicomputer, evolved into the application development language now called PowerHouse 4GL.
- Cognos' common stock is traded in the U.S. on the NASDAQ National Market System. In Canada, the company's stock is traded on the Toronto Stock Exchange.

Cognos' strategy is to offer an integrated family of software tools that supports the entire application development cycle for midrange and micro computing environments.

From September 1989 through December 1989, the company restructured its operations, including a reduction in workforce of approximately 200 employees, a reorganization of senior management, changes in sales and marketing organizations in order to improve sales effectiveness and focus Cognos' research and development efforts on the enhancement of existing products and development of complementary new products and services, and the consolidation of certain facilities and asset write-offs.

- The restructuring resulted in nonrecurring charges of \$4.7 million to fiscal 1990 income.
- Since this restructuring, Cognos has recorded profits in each of the five consecutive quarters from the fourth quarter of fiscal 1990 through the fourth quarter of fiscal 1991.

During fiscal 1990, Cognos sold all rights associated with its applications products (Multiview and PowerPlan) to a newly formed company, Multiview Inc., which is owned by former Cognos employees. Combined, the two products contributed 3% to total Cognos revenue for each of the fiscal years 1989 and 1990.

In April 1991, Cognos made a public offering of 2.06 million shares of its common stock, of which 1.5 million shares were sold by the company and 563,000 million by selling shareholders. Estimated net proceeds to the company will be \$23.1 million

Cognos' fiscal 1991 revenue reached \$141.2 million, a 26% increase over fiscal 1990 revenue of \$112.5 million. Net income reached \$6.7 million, compared to net losses of \$17.1 million for fiscal 1990. In the four-year summary that follows, financials are expressed in Canadian dollars.

**COGNOS INCORPORATED
FOUR-YEAR FINANCIAL SUMMARY**
(\$ millions Canadian, except per share data)

ITEM	FISCAL YEAR			
	2/91	2/90	2/89	2/88
Revenue	\$141.2	\$112.5	\$107.9	\$83.0
• Percent increase from previous year	26%	4%	30%	21%
Income (loss) before taxes	\$10.5	\$(14.3)	\$10.7	\$6.1
• Percent increase (decrease) from previous year	173%	(234%)	75%	(35%)
Net income (loss)	\$6.7	\$(17.1)	\$6.3	\$3.1
• Percent increase (decrease) from previous year	139%	(371%)	102%	(54%)
Earnings (loss) per share	\$0.63	\$(1.64)	\$0.62	\$0.32
• Percent increase (decrease) from previous year	138%	(365%)	94%	(61%)

(a) Includes restructuring charges of \$4.7 million.

Revenue growth in fiscal 1991 was mainly attributed to an increase in unit shipments of PowerHouse in the company's primary markets (Hewlett-Packard MPE-XL and DEC VAX), the successful introduction of several new products, and, to a lesser extent, favorable exchange rate movements and price increases.

- Product license revenue for PowerHouse in the HP and DEC markets increased by 22% and 33%, respectively, in fiscal 1991 compared to fiscal 1990.
- Within the HP market, an increase in product license revenue for PowerHouse of 56% from the newer MPE-XL computers was partly offset by a decrease in revenue of 31% from the older MPE-V computers.
- New products introduced in late fiscal 1990 and in fiscal 1991 included end-user reporting tools (PowerPlay, InQuizitive, and QuizPlus), PowerCASE, and versions of PowerHouse for the IBM AS/400 and for certain UNIX platforms. Product license revenue from these new products was approximately \$10.5 million during fiscal 1991.

Research and development expenditures were approximately \$13.6 million (10% of revenue) in fiscal 1991, compared to \$15.7 million (14% of revenue) in fiscal 1990.

PowerHouse competitors, by hardware market, include the following:

- HP market: HP and Infocenter Ltd.
- DEC market: DEC, Information Builders, Cincom Systems, and Oracle
- IBM AS/400 market: Synon and Lansa

Key Products and Services

Approximately 53% of Cognos' fiscal 1991 revenue was derived from software product licenses, 32% from product support, and 15% from education and product consulting services. A three-year summary of source of revenue follows:

**COGNOS INCORPORATED
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions, Canadian)**

ITEM	FISCAL YEAR					
	2/91		2/90		2/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$74.7	53%	\$56.6	50%	\$58.9	55%
Product support	45.7	32%	36.6	33%	31.6	29%
Education and consulting	20.7	15%	19.3	17%	17.4	16%
TOTAL	\$141.1	100%	\$112.5	100%	\$107.9	100%

Cognos' integrated family of software tools supports all phases of the application development cycle, including analysis and design, construction, end-user reporting, maintenance, and data management functions.

- Cognos' core product, PowerHouse, is an advanced application development language. The company's other products complement PowerHouse and are generally licensed only by existing PowerHouse users or in connection with the licensing of PowerHouse.
- Since 1981, Cognos has licensed PowerHouse for use on more than 18,000 midrange computers.

PowerHouse incorporates a powerful instruction set and data dictionary.

- PowerHouse also features QUICK[®], a screen, menu, and form generator; QUIZ[®], a report generator designed for read-only data base access; and QTP, a special facility for data manipulation and batch processing tasks.
- PowerHouse 4GL operates on DEC VAX/VMS and RISC/ULTRIX systems; HP 3000-900 (MPE-XL), HP 9000-800 (HP-UX), and HP 3000 MPE-V systems; Data General ECLIPSE MV and AViiON computers; and IBM AS/400 and RS/6000 systems.

- PowerHouse PC allows users to develop programs on a personal computer running under MS-DOS or OS/2, and to execute those programs on the PC or transfer them to supported midrange platforms.
- A version of PowerHouse supporting the client-server model is under development. Initial release on HP MPE systems is scheduled for the end of calendar 1991.

PowerCASE is Cognos' analysis and design tool. The product is currently available for DEC VAXstations under DECWindows and its fully compatible with the VAX version of PowerHouse. An OS/2 version is scheduled for availability in the first half of fiscal 1992.

PowerHouse ARCHITECT is a maintenance product that provides computer generated documentation for applications, rapid prototyping of data definition changes, and automatic analysis of the impact of those changes on specific programs. The product is currently available for HP MPE-V and MPE-XL and DEC VAX computers and is scheduled for availability on the IBM AS/400 and certain UNIX platforms in fiscal 1992.

Reporting tools include the following:

- PowerPlay is a management reporting and analysis tool that supports a client-server computing model. It is available for IBM PCs and a version for the Macintosh is scheduled for availability during fiscal 1992.
- InQuizitive is an easy-to-use, menu-driven query-and-reporting tool for DEC VAX and HP MPE-XL systems. It is scheduled for availability on the IBM AS/400 and certain versions of UNIX in fiscal 1992.
- QuizPlus is an end-user report writer for HP MPE-V systems.

PowerHouse StarBase is a relational data base management system that features on-line transaction processing and distributed processing capabilities for multiuser environments.

- PowerHouse StarBase is available for DEC VAX, DEC RISC ULTRIX; HP MPE-XL and HP-UX; IBM RS/6000; and Data General AViiOn systems.

PowerHouse StarGate allows remote read-and-write access, via network communications software, to Oracle data bases on DEC VAX computers.

Cognos offers its customers full service and support through technical newsletters, telesupport, problem evaluation, seminars, and training courses. Cognos also provides consultants to assist in building application and data base design/methodology expertise.

Industry Markets

Cognos' software products are marketed to a range of small, medium, and large organizations in various industries.

Direct sales accounted for 65% of product license revenue in fiscal 1991, as compared to 58% in fiscal 1990.

Third-party channels, which includes VARs, use Cognos tools to develop packaged software applications for sale directly to end users and distributors. The VAR pays a royalty to Cognos for each copy of Cognos software embedded within the application. Third-party sales accounted for 25% of product license revenue in fiscal 1991. As of February 28, 1991, there were approximately 200 VARs offering more than 600 applications using Cognos products.

Telesales are used to sell products and services primarily to the installed base of Cognos customers. Approximately 10% of fiscal 1991 product license revenue was from telesales.

Cognos is an HP PLUS program participant, a DEC Cooperative Marketing Program participant, an IBM Business Partner in certain geographic markets, and a Data General Independent Software Vendor. In addition, DEC and Data General are licensed to sell Cognos' products with their hardware.

Geographic Markets

A three-year summary of source of revenue, as reported by Cognos, follows:

**COGNOS INCORPORATED
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions, Canadian)**

ITEM	FISCAL YEAR					
	2/91		2/90		2/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Domestic						
- Canada	\$19.7	14%	\$16.4	15%	\$13.0	12%
- Export	2.7	2%	4.3	4%	3.5	3%
U.S.	54.9	39%	45.9	41%	48.2	45%
Europe	52.5	37%	38.9	34%	36.5	34%
Australia and Far East	11.4	8%	7.0	6%	6.7	6%
TOTAL	\$141.2	100%	\$112.5	100%	\$107.9	100%

Cognos sells its products directly through 49 sales offices located in 13 countries.

International subsidiaries are located in the U.S., the U.K, Australia, Barbados, Holland, Switzerland, France, Germany, Sweden, Spain, Belgium, Japan, and Singapore.

Cognos also sells its products internationally through independent distributors in markets not served exclusively by Cognos' direct sales force.

**Computer
Hardware and
Software**

Cognos has various DEC, HP, Data General, and IBM systems installed at its data center in Ottawa for research and development and customer support.

COMPANY PROFILE

COGNOS INCORPORATED

3755 Riverside Drive
Ottawa, Ontario K1G 3Z4
(613) 738-1440

Michael U. Potter, Chairman and CEO
Thomas I. Csathy, President and COO
Public Corporation, NASDAQ, TSE
Total Employees: 1,131 (2/89)
Total Revenue, Fiscal Year End
2/27/89: \$107,912,000 (\$ Canadian)

The Company

Cognos Incorporated develops, markets and supports application development and data management software products. The company's primary product is the PowerHouse[®] 4GL application development language.

- Cognos was founded in 1969 as a software consulting firm and began marketing packaged software products in 1979. Its original product, a report writer for the HP 3000 minicomputer, evolved into the application development language now called PowerHouse 4GL.
- Cognos' common stock is traded in the U.S. on the NASDAQ National Market System. In Canada, the company's stock is traded on the Toronto Stock Exchange.

Cognos is dedicated to providing a complete application development and data management environment that integrates with major hardware platforms and data bases.

Cognos' fiscal 1989 revenue reach \$107.9 million, a 30% increase over fiscal 1988 revenue of \$83 million. Net income rose 102%, from \$3.1 million to over \$6.3 million. In the five-year summary that follows, financials are expressed in Canadian dollars.

**COGNOS INCORPORATED
FIVE-YEAR FINANCIAL SUMMARY**
(\$ thousands Canadian, except per share data)

ITEM	FISCAL YEAR				
	2/89	2/28	2/87	2/86	2/85
Revenue	\$107,912	\$83,031	\$68,433	\$45,340	\$30,088
• Percent increase from previous year	30%	21%	51%	51%	42%
Income before taxes	\$10,706	\$6,105	\$9,403 (a)	\$2,187	\$1,381
• Percent increase (decrease) from previous year	75%	(35%)	330%	58%	(48%)
Net income	\$6,346	\$3,134	\$6,853 (a)	\$902	\$461
• Percent increase (decrease) from previous year	102%	(54%)	660%	96%	(63%)
Earnings per share	\$0.62	\$0.32	\$0.83 (a)	\$0.12	\$0.07
• Percent increase (decrease) from previous year	94%	(61%)	592%	71%	(63%)

- (a) In August 1986, Cognos sold investment tax credits concurrently with its initial public offering in Canada. The effect of this non-recurring sale in fiscal 1987 was to increase income before taxes by \$2.5 million, net income by \$1.8 million, and earnings per share by \$0.22.

Cognos management attributes revenue growth in fiscal 1989 to increased market acceptance of PowerHouse products and related services in each of its primary hardware markets: Hewlett-Packard, DEC, and Data General.

- Revenue from PowerHouse products and related services in the Hewlett-Packard market increased by \$11.8 million (27%) from fiscal 1988 to fiscal 1989. Cognos' PowerHouse products and services for Hewlett-Packard's Precision Architecture (Series 900) users accounted for \$13 million of revenue in fiscal 1989.
- Revenue from PowerHouse products and related services in the DEC market increased by \$11.5 million (56%) during fiscal 1989.
- Revenue from PowerHouse products and related services in the Data General market increased by \$1.7 million (23%) during fiscal 1989.

- Revenue growth from fiscal 1988 to 1989 was reduced by a near 8% decline in the value of the company's primary trading currencies relative to the company's Canadian dollar reporting currency over that period.

Gross research and development expenditures were approximately \$14.4 million (13% of revenue) in fiscal 1989, compared to \$12 million (14% of revenue) in fiscal 1988, and \$9.6 million (14% of revenue) in fiscal 1987.

- Of these expenditures, approximately \$1.3 million, \$670,000, and \$229,000 were recovered from third parties (primarily Canadian federal and provincial governments) during fiscal 1989, 1988, and 1987, respectively.

As of February 1989, Cognos had 1,131 employees. The company currently has approximately 1,200 employees.

PowerHouse competitors, by hardware market, include the following:

- Hewlett-Packard market: HP and Infocenter Ltd.
- DEC market: DEC, Information Builders, Relational Technology, Cincom Systems, and Oracle.
- Data General market: Information Builders, Relational Technology, and Cybertek Computing.

Key Products and Services

Over 55% of Cognos' fiscal 1989 revenue was derived from software product licenses, 29% from product support, and 15% from education and product consulting services. A three-year summary of source of revenue follows:

**COGNOS INCORPORATED
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions, Canadian)**

ITEM	FISCAL YEAR					
	2/89		2/88		2/87	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$59.7	55%	\$48.9	59%	\$43.8	64%
Product support	31.6	29%	23.9	29%	17.3	25%
Education and consulting	16.6	15%	10.2	12%	7.3	11%
TOTAL	\$107.9	100%	\$83.0	100%	\$68.4	100%

Cognos' PowerHouse solution includes: the PowerHouse fourth-generation language (PowerHouse 4GL) and application development tools; PowerHouse StarBase™, an advanced SQL-compatible relational data base management system (RDBMS); and PowerHouse StarNet™ and PowerHouse StarGate™, components of PowerHouse StarBase which provide connectivity and data base manipulation capabilities.

There are currently PowerHouse installations at over 12,000 sites in over 60 countries and close to 3,000 installations of PowerHouse PC.

PowerHouse 4GL, the heart of the Cognos solution, is an application development language that supports the application development cycle, from design through documentation and maintenance.

- PowerHouse 4GL features QUICK^R, a screen-, menu-, and form-generator; QUIZ^R, a report generator designed for read-only data base access; QTP, a special facility for data manipulation and batch processing tasks; and a powerful 4GL dictionary that stores the definitions and attributes for each data item in an application.
- PowerHouse 4GL operates on DEC VAX/VMS systems, Data General ECLIPSE MV computers, and Hewlett-Packard HP 3000 systems under MPE V and MPE XL.

- A new UNIX version of PowerHouse 4GL is now available for HP-UX and will also be ported to other UNIX platforms. Development efforts are also underway to bring PowerHouse to users of IBM's AS/400 and MVS systems.

PowerHouse StarBase, released in January 1989, is an advanced RDBMS that offers distributed data base functionally and features distributed networking, data integrity and security, high multi-user performance, ANSI and ISO standard SQL compliance, and close integration with hardware architectures.

- The initial version of PowerHouse StarBase runs on DEC VAX systems, is tightly integrated with the VMS operating system, and is fully compatible with VAXclusters.

PowerHouse StarNet serves as a requester/server data communications facility, processing requests for data base access and routing them to the appropriate data base.

- PowerHouse StarNet adds distributed processing capabilities to PowerHouse StarBase. The product currently supports DECnet and TCP/IP communications protocols and can be used to access PowerHouse StarBase, Rdb, and RMS files.

PowerHouse StarGate provides the necessary conversions that allow data bases of different structures to exchange data. The product lets users access different data bases for different applications, or within the same application.

In addition to its core development language and data management system, Cognos offers additional software products that are part of the total PowerHouse solution as follows:

- PowerHouse PC provides the full capabilities of PowerHouse 4GL on IBM PC/AT and compatibles and 386-based systems.
 - The product runs on networks supporting the OS/2 LAN Manager (Microsoft), and popular MS-DOS-based PC LANs, including Novell, 3COM, Ungermann-Bass, Banyan, and the IBM Token Ring-based products.
 - Through its host communications with DEC VAX, Data General, and Hewlett-Packard mid-range systems, PowerHouse PC provides source file and data file transfer between the microcomputer and mid-range PowerHouse systems.

- PowerHouse users on mid-range networks such as DECnet PCSA, HP StarLAN, and Data General PC*I, can develop applications that run on the microcomputer, while storing software and data on their mid-range systems.
- Financial software packages available from Cognos include the following:
 - MULTIVIEW^R offers integrated financial applications, including general ledger, accounts receivable, and accounts payable.
 - PowerPlan^R is a decision support tool for financial planning and analysis. The product handles text and numeric data and accepts reports from other Cognos products, including MULTIVIEW and The EXPERTTM, an information management system that provides immediate access to information in a data base.

Cognos products that enhance the application development and data management functions of the company's core products include the following:

- PHLEXTM is a customized PowerHouse link to Index Technology's computer-aided software engineering (CASE) tool, Excelsator. It translates systems designed in Excelsator to PowerHouse 4GL code.
- PowerHouse ARCHITECTTM is a tool that generates prototypes of applications, reduces maintenance time, and automatically creates documentation.
- PowerHouse GRAPHICSTM is an on-line graphics and reporting system that allows users to extract data quickly from a data base and display it graphically.
- The 20/20 Database Connection, introduced in 1988, allows data from PowerHouse applications to be displayed in Access Technology's 20/20 spreadsheets.

The following products, jointly developed by Cognos and DB/ACCESS, Inc., allow PowerHouse users to access data on IBM mainframes:

- LOAD/PowerHouseTM allows PowerHouse users to access IBM mainframe data from minicomputers.

- VIEW/PC™ allows PowerHouse users to access IBM mainframe data from microcomputers.

During 1989, Cognos will also introduce InQuizitive™, a new end-user report writer and a new executive information system (EIS) product.

- InQuizitive has the ability to read PowerHouse data dictionaries, subfiles, and supported data bases directly, enabling end users to produce reports or conduct ad-hoc inquiries from information stored there.
- The product will initially be available for use with PowerHouse in the DEC VAX environment, but future plans include the release of versions to operate on microcomputers (DOS and OS/2), Hewlett-Packard, and Data General platforms.

Cognos offers its customers full service and support through technical newsletters, telesupport, problem evaluation, seminars, and training courses, as well as by providing Cognos consultants to assist in building application and data base design/methodology expertise.

Industry Markets

Cognos' software products are marketed to a range of small, medium, and large organizations in various industries.

In addition to its direct sales organization, Cognos has developed the PowerHouse Partners Program, under which approximately 300 independent application developers market applications based on Cognos products. The growing list of Partner products currently covers more than 25 industries, from manufacturing and transportation, to banking and finance, health care, and government.

- PowerHouse Partners are provided with marketing support that includes opportunities to exhibit together with Cognos at trade shows, to participate in product seminars, and be listed in the Cognos Solutions Directory and computer data base.
- In addition, PowerHouse Partners receive full support through Cognos education and consulting services.

Geographic Markets

A three-year summary of source of revenue, as reported by Cognos, follows:

**COGNOS INCORPORATED
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions, Canadian)**

ITEM	FISCAL YEAR					
	2/89		2/88		2/87	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Domestic	\$13.0	12%	\$9.4	11%	\$7.7	11%
- Canada	3.5	3%	2.3	3%	2.1	3%
- Export	48.2	45%	36.6	44%	34.9	51%
U.S.	36.5	34%	30.3	37%	20.8	30%
Europe	6.7	6%	4.4	5%	2.8	4%
Australia						
TOTAL *	\$107.9	100%	\$83.0	100%	\$68.4	100%

* Differences are due to rounding

Cognos sells its products directly through sales offices in over 50 locations throughout North America, Europe, Australia, and Asia.

International subsidiaries are located in the U.S., the U.K., Australia, Barbados, Holland, Switzerland, France, West Germany, Sweden, Spain, and Belgium.

Cognos also sells its products internationally through 29 independent distributors in markets not served exclusively by its direct sales force. Sales through third parties accounted for 15% of Cognos' fiscal 1989 revenue.

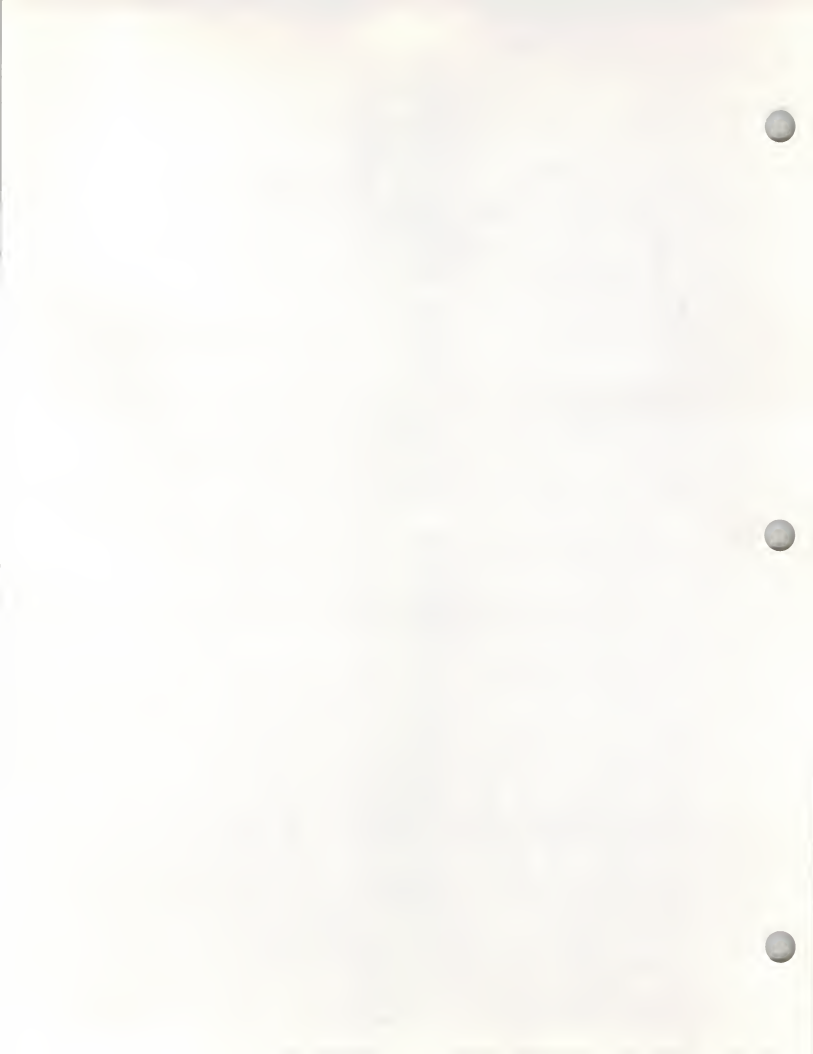
A telesales channel was established in the U.S., the U.K., and Canada during fiscal 1989. Telesales accounted for 4% of Cognos' software license sales during fiscal 1989.

Computer Hardware and Software

Cognos has the following computers installed at its data center in Ottawa for research and development and customer support:

- 4 HP-3000s, MPE
- 2 HP 3000s, MPE XL
- 1 HP 3000, UX (840)

- 1 DEC VAX 730, VMS
- 1 DEC VAX 750, VMS
- 1 DEC VAX 785, VMS
- 1 DEC VAX 8850, VMS
- 1 DEC MicroVAX II, VMS
- 1 Data General MV 10000, AOS/VS II
- 1 Data General MV 7800, AOS/VS
- 1 IBM AS/400, OS/400
- 13 Sun Servers, UNIX



COMPANY PROFILE

COGNOS INCORPORATED
3755 Riverside Drive
Ottawa, Ontario K1G 3N3
(613) 738-1440

Michael U. Potter, Chairman and CEO
Thomas I. Csathy, President
Public Corporation, TSE, OTC
Total Employees: 717
Total Revenue, Fiscal Year End
2/27/87: \$68,433,000 (\$ Canadian)

THE COMPANY

- Cognos Incorporated develops, markets, and supports the POWERHOUSE application development language product line, as well as extensions of POWERHOUSE for information retrieval, graphics reporting, application prototyping, and automatic generation of documentation. The company also markets application software products for accounting and financial planning.
- Cognos was founded in 1969 as Quasar Systems Ltd. to provide custom application development professional services. In fiscal 1982 the company made the decision to focus solely on the application development language market and, as a result, discontinued its custom business over fiscal 1983 and 1984.
- The company changed its name to Cognos in 1984 and in 1985 changed its fiscal year end from August 31 to the last day of February.
- Cognos' common shares have been traded on the Toronto Stock Exchange since the company's initial public offering in Canada in August 1986. In July 1987 Cognos made its initial public offering in the U.S. of 1,686,000 shares of common stock, of which one million were sold by the company and 686,000 were sold by selling shareholders. Estimated net proceeds to the company of \$14.6 million (U.S.) will be used for general corporate purposes.
- Cognos' fiscal 1987 revenue reached \$68.4 million, a 51% increase over fiscal 1986 revenue of \$45.3 million. Net income rose 660%, from \$902,000 in fiscal 1986 to nearly \$6.9 million in fiscal 1987. In the five-year summary that follows, financials are expressed in Canadian (Cdn.) dollars. Results for fiscal 1985, 1984, and 1983 have been restated to reflect the change in the company's year end from August to February.

COGNOS INCORPORATED
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

Fiscal Year Item	2/87	2/86	2/85	2/84	2/83
Revenue from continuing operations	\$ 68,433	\$ 45,340	\$ 30,088	\$ 21,153	\$ 14,646
• Percent increase from previous year	51%	51%	42%	44%	N/A
Income (loss) from continuing operations	\$ 9,403(a)	\$ 2,187	\$ 1,381	\$ 2,670	\$ (1,268)
• Percent increase (decrease) from previous year	330%	58%	(48%)	311%	N/A
Net income (loss)	\$ 6,853(a)	\$ 902	\$ 461	\$ 1,258(b)	\$ (1,215)(b)
• Percent increase (decrease) from previous year	660%	96%	(63%)	204%	N/A
Earnings (loss) per share	\$ 0.83(a)	\$ 0.12	\$ 0.07	\$ 0.19	\$ (0.22)
• Percent increase (decrease) from previous year	592%	71%	(63%)	186%	N/A

- (a) In August 1986 Cognos sold investment tax credits concurrently with its initial public offering in Canada. The effect of this non-recurring sale in fiscal 1987 was to increase income from continuing operations before taxes by \$2.5 million, net income by \$1.8 million, and earnings per share by \$0.22.
- (b) Includes losses from discontinued operations of \$505,000 and \$622,000 for fiscal 1984 and fiscal 1983, respectively.
- The company's financials have been prepared in accordance with generally accepted accounting principles in Canada which conform with those in the U.S., except with respect to deferred income taxes recorded as an asset. Cognos' net income (loss), in conformity with U.S. accounting principals, is as follows (\$ thousands, Cdn.):

	<u>2/87</u>	<u>2/86</u>	<u>2/85</u>	<u>2/84</u>	<u>2/83</u>
Net income (loss)	\$7,297	\$1,051	\$461	\$444	\$(2,511)

- Cognos management attributes revenue growth in fiscal 1987 primarily to the increase in market acceptance of POWERHOUSE, a larger direct sales force, and a broader geographic distribution.

- Virtually all of the increase in fiscal 1986 revenue was related to the growth in the sales of POWERHOUSE and reflected continued acceptance of the company's products in the HP market, initial growth in the DEC environment, and the introduction of POWERHOUSE on Data General computers.
- Research and development expenditures were approximately \$9.6 million (14% of revenue) in fiscal 1987, \$7.8 million (17% of revenue) in fiscal 1986, and \$6.6 million (22% of revenue) in fiscal 1985. Of these amounts, approximately \$229,000, \$1.9 million, and \$2.1 million were recovered from third parties (primarily the Canadian government) for fiscal 1987, 1986, and 1985, respectively.
- As of February 28, 1987, Cognos had 717 full-time employees, segmented as follows:

Marketing, management, administration, and support	168
Research and development	126
Field sales and support	<u>423</u>
	717
- Products that compete with Cognos' POWERHOUSE application development language, by hardware market, include the following:
 - HP market: Rapid (from HP) and Speedware (from Infocenter Ltd.).
 - DEC market: Datatrieve and Rally (from DEC), Focus (from Information Builders, Inc.), Ingres (from Relational Technology, Inc.), Mantis (from Cincom Systems, Inc.), and Oracle (from Oracle Corporation).
 - Data General market: Focus, Oracle, CQCS (from Cybertek Computing, Ltd.), and Info (from Henco, Inc.).

KEY PRODUCTS AND SERVICES

- Approximately 62% (\$42.7 million) of Cognos' fiscal 1987 revenue was derived from its various software product licenses and 38% (\$25.7 million) from associated support services. A further breakdown of source of revenue for fiscal 1987 follows:

	<u>Percent of Total</u>	<u>Revenue (\$ Millions)</u>
Software products		
• POWERHOUSE and extension products	58%	\$40.1
• Application products	<u>4</u>	<u>2.6</u>
Subtotal	62%	\$42.7
Support services		
• Annual product support fees	25%	\$17.3
• Education services	6	4.1
• Product consulting	5	3.2
• Other	<u>2</u>	<u>1.1</u>
Subtotal	38%	\$25.7
Total	100%	\$68.4

- Cognos currently markets its software products to users of HP Series 3000, DEC VAX, and Data General ECLIPSE MV mid-range computers.
- Cognos' principal product line, POWERHOUSE, is an advanced application development language that interfaces with the data base management systems (DBMSs) of various hardware manufacturers and integrates with applications written in older programming languages.
 - POWERHOUSE is used by programmers to develop business applications and by non-programmers to access data, generate reports, and develop less complex applications.
 - The core of POWERHOUSE includes a data dictionary that centralizes and standardizes all data definitions data storage formats, display formats, input edits, help messages, and security.
 - Components integrated with the data dictionary include QUICK, which automatically generates menus and screens for on-line applications; QUIZ, a data extraction and formatting tool; and QTP, a volume transaction processor.
 - The price of the full POWERHOUSE product ranges from \$5,000 to \$170,000 (\$ U.S.), depending on the size of the computer.
 - The price of the reporting-only option (QUIZ and data dictionary only) ranges from \$2,500 to \$85,000 (\$ U.S.), depending on the size of the computer.
 - POWERHOUSE has been licensed for use on over 7,000 computers worldwide.

- POWERHOUSE has been available on HP computers since 1982, DEC VAX computers since May 1984, and Data General ECLIPSE MV computers since January 1985. The four-year summary that follows shows the percent of revenue derived from sales of POWERHOUSE, excluding support services, for each of the company's three hardware markets:

	<u>2/87</u>	<u>2/86</u>	<u>2/85</u>	<u>2/84</u>
HP	66%	76%	88%	100%
DEC	23	15	11	-
Data General	<u>11</u>	<u>9</u>	<u>1</u>	<u>-</u>
	100%	100%	100%	100%

- Cognos is adapting POWERHOUSE for use on the IBM PC/AT. The initial version will also provide data communications between the IBM PC/AT and HP minicomputers. Availability is scheduled for the end of fiscal 1988.
- Cognos offers three products that extend the capabilities of POWERHOUSE as follows:
 - POWERHOUSE GRAPHICS directly accesses data in any DBMS supported by POWERHOUSE to create business graphs. The product is currently available for HP and DEC computers and ranges in price from \$1,000 to \$59,000 (\$ U.S.), depending on the size of the computer.
 - THE EXPERT is an information retrieval product that produces summarized reports with a minimum of instructions. The product is currently available for HP computers and ranges in price from \$4,900 to \$7,500 (\$ U.S.), depending on the size of the computer.
 - POWERHOUSE ARCHITECT accelerates the data definition and prototyping process, automatically generates documentation, and provides on-line cross-referencing of files, data elements, and programs. The product is available for HP computers and ranges in price from \$3,500 to \$8,250 (\$ U.S.), depending on the size of the computer.
- Application products available from Cognos include the following:
 - MULTIVIEW is a family of accounting software products developed by Cognos using POWERHOUSE. The product line includes general ledger, accounts payable, and accounts receivable components.

- POWERPLAN is a financial planning product that allows financial analysts and non-programmers to create financial models and plans. The product is marketed both independently and as a component of MULTIVIEW.
- MULTIVIEW and POWERPLAN are available for HP computers and are frequently sold with POWERHOUSE. When sold together they are priced from \$20,000 to \$52,000 (\$ U.S.), depending on the size of computer.
- One or more components of MULTIVIEW and POWERPLAN are licensed for use on over 450 computers.
- Support services available from Cognos include the following:
 - Product support services consist of product and documentation enhancements, quarterly technical publications, and phone-in inquiry services staffed by technical consultants. Cognos currently provides these services to over 77% of its customers for an annual fee of approximately 15% of the current product license fee.
 - Customer education services include computer-based training and courses at Cognos education centers and customer sites.
 - Consulting services include performance and design reviews and product modification.

INDUSTRY MARKETS

- Cognos' products are licensed for use in a range of small, medium, and large organizations, including over 120 of the Fortune 500 companies.
- Cognos has clients in the discrete and process manufacturing, distribution, telecommunications, transportation, and banking industries, as well as government.
- Cognos offers low-cost leases of its products to universities and colleges that include POWERHOUSE in their curriculum. Currently, 166 institutions in 16 countries are participating in this program.

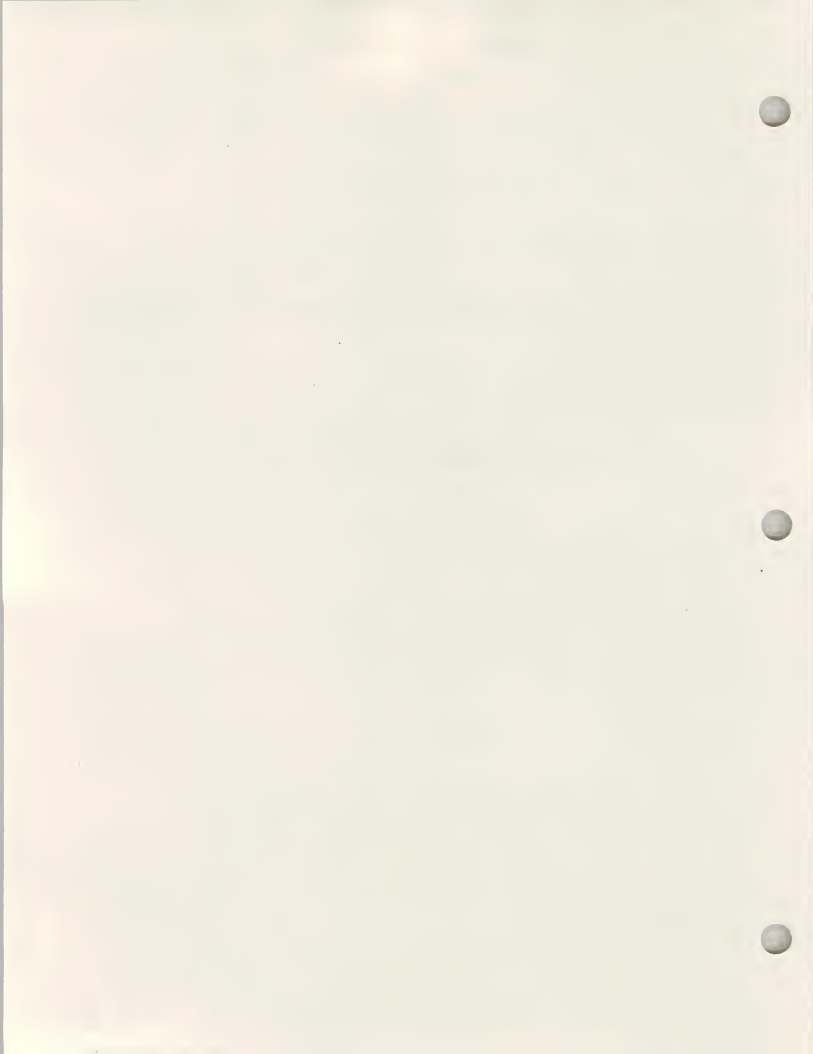
GEOGRAPHIC MARKETS

- A four-year summary of Cognos' geographic sources of revenue (from continuing operations) follows:

COGNOS INCORPORATED

	<u>2/87</u>	<u>2/86</u>	<u>2/85</u>	<u>2/84</u>
U.S.	51%	59%	64%	65%
Canada	11	13	21	21
Europe	30	22	11	10
Other	<u>8</u>	<u>6</u>	<u>4</u>	<u>4</u>
	100%	100%	100%	100%

- Approximately 88% of Cognos' fiscal 1987 revenue was derived from its direct sales organization, 9% from value-added resellers, and 3% from independent distributors.
- Cognos currently employs 91 sales representatives worldwide in the following locations:
 - U.S.: Amherst, Atlanta, Boston, Chicago, Cincinnati, Cleveland, Cupertino, Dallas, Detroit, Houston, Los Angeles, Newport Beach, New York City, Philadelphia, Pittsburgh, San Francisco, Seattle, Syracuse, and Washington, D.C.
 - International: Sales offices are located in Canada (5), the U.K. (5), France (2), the Netherlands, Germany (2), Australia (2), Sweden, and the Far East.
- Cognos has licensed 112 software companies to develop products in the POWERHOUSE language or to incorporate components of POWERHOUSE in their products.
- Cognos has entered into agreements with 28 independent distributors to market its products in certain international markets not served exclusively by its direct sales force.



COMPANY PROFILE

COIN BANKING SYSTEMS, INC.

5555 Oakbrook Parkway
Suite 155
Norcross, GA 30084
(404) 441-1185

Dan Gordon, President and CEO
Private Corporation
Total Employees: 50
Total Revenue, Fiscal Year End
12/31/91: \$4,000,000*

*INPUT estimate

The Company

COIN Banking Systems, Inc. provides PC and LAN-based applications software products for banks and other lending institutions.

- The company's objective is to focus on the continuing development and marketing of an efficient, cost-effective loan application processing system that provides optimum control of the loan approval process, contributes to lower operating costs, and supports credit management for institutions with varying organizational structures.
- COIN Banking Systems was originally founded in 1985 as a division of COIN Financial Systems, which also provides turnkey systems to automobile dealerships. In 1989, the banking division spun off to form COIN Banking Systems, a separate, private company.

Key Products and Services

COIN Banking Systems' 1991 revenue was derived primarily from applications software products and software support, training, installation, and consulting services.

COIN Banking Systems' principal product is Application Manager™, a PC-based credit processing system for financial services firms.

- Application Manager, introduced in 1988, automates every step of credit application processing, including data entry, credit report retrieval, verification, scoring, decisioning, and reporting.
- Optional software modules support document preparation and compliance, automatic faxing of decisions to the application source, ad hoc reporting, automatic scoring, archiving to optical disk, and interfacing to host systems.

- Versions are available for indirect lending, direct consumer or commercial lending, bankcard operations, and retail lending.
- Application Manager runs on IBM and compatible PCs.
- Application Manager is currently installed in over 350 sites, including commercial and consumer banks, savings and loans, credit unions, and retail lending centers.

Decision Manager is a PC-based credit decision system developed by COIN Banking Systems and MDS Decision Systems.

- Decision Manager is designed to review credit applications and recommend decisions based on client-defined parameters and the tools provided by MDS and COIN.
- The product is based on scorecards to evaluate risk from MDS and credit processing software (Application Manager) from COIN. The user can set policy rules, determine acceptable bankruptcy risk, judge financial capacity, and establish limit-setting policies according to its institution's specifications.
- Decision Manager operates on IBM and compatible PCs.

Support services provided by COIN Banking Systems include the following:

- Pre-installation consulting
- Training and installation
- Software and hardware support
- 800 telephone support
- Remote diagnostics
- Enhancements

COIN Banking Systems continues to support, but no longer actively markets its Smart Lending loan origination system.

Industry Markets

COIN Banking Systems' revenue is derived from financial institutions and retail lending centers.

Geographic Markets

One hundred percent of COIN Banking Systems' revenue is derived from the U.S.

In addition to its headquarters in Norcross (GA), COIN Banking Systems has a West Coast sales office in the Los Angeles area.

COMPANY PROFILE

COIN DEALERSHIP SYSTEMS, INC.

3300 Breckinridge Boulevard
Duluth, GA 30136-4907
Phone: (404) 717-1700
Fax: (404) 717-8401

John Hiemstra, President
Private Company
Total Employees: 745
Total Revenue, Fiscal Year End
12/31/91: \$66,000,000

The Company

COIN Dealership Systems (COIN) develops, markets, and supports turnkey systems to automate the finance, insurance, and sales functions in automobile dealerships.

- The company previously operated as the Automotive Division of COIN Financial Systems, which also provided turnkey systems to the banking industry.
- In 1989, the banking product line was spun off as a separate company, COIN Banking Systems, based in Norcross (GA) with 50 employees and the Automotive Division was renamed COIN Systems.
- In September 1990, COIN Systems purchased Convergent Dealership Group of Hunt Valley (MD) from Unisys, tripling the size of COIN Systems. At the time of the acquisition the combined companies had over 900 employees.
- The operations of Convergent Dealership Group have been merged into COIN Systems and the company has been renamed COIN Dealership Systems, Inc.

COIN's 1991 revenue reached \$66 million compared to \$18 million for 1990. The growth was attributed to the acquisition of Convergent Dealership Group in late 1990. COIN management anticipates that 1992 revenue will exceed \$73 million.

As of June 1992, COIN had 745 employees, segmented as follows:

Marketing and sales/ product development	120
Customer support and software services	362
Installation services	197
General and administrative	<u>66</u>
	745

Major competitors include Reynolds and Reynolds and Automatic Data Processing (ADP).

Key Products and Services

COIN derives all of its revenue from turnkey system sales.

The COIN Dealership System offers modules that support the sales, parts, service, and accounting functions of automobile dealerships.

- The COIN Sales System manages the sales cycle, from prospecting to customer follow-up. Components include: Sales Management, Prospect Management, Vehicle Management, Rental Management, Fleet Management, and Teleforms.
- The COIN Service Management System supports repair order billing, repair person dispatching, and service history tracking/preventive maintenance.
- The Parts System supports parts inventory management and counter billing.
- The COIN Accounting Management System integrates general ledger, receivables, payables, and payroll functions.
- The Dealer Communications System links finance, accounting, and factory transactions between the dealer and the auto manufacturer.
- COIN offers various systems based on the size of the dealership. Systems are available on Texas Instruments computers, supporting from one to 79 users.
- There are currently over 5,450 COIN dealership systems installed worldwide.

Prophet is COIN's next generation series of applications, whose key feature is interactive on-line help tutorials. The system operates on a range of UNIX-based platforms and there are over 80 installations.

Support services provided by COIN include on-site software and hardware support, 800-number telephone support, training, and continuing education.

Industry Markets

COIN derives 100% of its revenue from automotive dealers.

Major clients include domestic, Japanese, and European automobile manufacturers, as well as some 23,000 auto dealerships that do business with them.

Geographic Markets

Over 98% of COIN's revenue is derived from the U.S. and the remainder from international sources.

COIN operates more than 90 service locations nationwide, as well as nine regional offices.

Sales offices are in Duluth (GA), Hunt Valley (MD), Chatsworth (CA), Dallas (TX), Boston (MA), Clark (NJ), Cleveland (OH), Orlando (FL), and Detroit (MI).

COIN handles its international sales through its offices in England.

Computer Hardware and Software

COIN maintains a Prime 2750 at its headquarters, with TI 1507s and TI 1505s running UNIX. Gateway 2000 systems run as client machines off of TI 1500 series systems.

COMPANY PROFILE

COIN FINANCIAL SYSTEMS

5555 Oakbrook Parkway
Building 500
Norcross, GA 30093
(404) 447-6103

Mark Singleton, President
Private Company
Total Employees: 312
Total Revenue, Fiscal Year End
7/31/88: \$24,020,150

The Company

COIN Financial Systems (COIN), originally formed in 1969 as Creative Software, Inc., provides turnkey systems for automotive dealers and the banking industry.

Total fiscal 1988 revenue reached \$24 million, a 13% increase over fiscal 1987 revenue of \$21.3 million. A three-year revenue summary follows:

COIN FINANCIAL SYSTEMS THREE-YEAR REVENUE SUMMARY (\$ thousands)

ITEM	FISCAL YEAR		
	7/88	7/87	7/86
Revenue	\$24,020	\$21,293	\$17,664
• Percent increase from previous year	13%	21%	N/A

As of May 1989, COIN had 312 employees, segmented as follows:

Marketing and sales	57
Customer support and software services	177
Installation services	30
General and administrative	48
	312

Major competitors include Convergent Technologies, Reynolds and Reynolds, and Automatic Data Processing (ADP).

Key Products and Services

COIN derived all of its fiscal 1988 revenue from turnkey system sales.

COIN designs, develops, markets, and supports turnkey microcomputer systems to automate finance, insurance, and sales functions in automobile dealerships and lending and platform functions in banks.

COIN's operations are separated into the Automotive Division and the Banking Division.

In the Automotive Division, COIN F&I systems automate the front end of dealerships. They assist the finance and insurance (F&I) manager in selling the dealership's insurance policies and finance plans, and also the sales manager in tracking prospects, customers and vehicles. Also, COIN systems can generate follow-up letters, create salesperson performance reports, manage vehicle inventories, and help sell extended warranties and other automotive protection products.

- All input information can be customized for each dealership so that monthly payments can be calculated according to dealership policies and state and federal information.
- The systems allow calculations of payment variables to be pre-programmed. COIN systems also allow the F&I manager to change price, trade-in, cash, interest rate, or loan term of a deal to tailor it to a particular customer's monthly budget.
- Color graphics for payment protection comparisons, savings on fuel, and cash purchase versus finance comparisons allow the salesperson to further reinforce a customer's purchase decision.
- COIN is working with Ford Credit Britain to provide and support F&I systems for Ford Dealers in the U.K. These systems work with Ford Credit's Telecredit computer system and provide automatic underwriting of car loans.
- COIN F&I systems are based on hardware from a variety of manufacturers including: IBM, Wyse Technology, Texas Instruments, NEC, Fujitsu and NCR. Currently, the company offers a variety of COIN front-end systems to automobile dealers.
- The COIN 3200 Series is a multi-user system designed for mid- and large-sized dealerships. This system supports between 2 and 32 users, and is based on NCR Tower equipment. The 3200 Series supports monochrome, color and high-resolution color parachute terminals. These terminals may be detached from the main CPU for off-site

sales. IBM Personal Computers and Texas Instruments Professional Computers can also be connected to the system.

- COIN's 3201 Series is a range of single user systems with monochrome (3201MS), color (3201CS) or high-resolution color terminals (3201HS). The 3201HS supports 3-dimensional color graphics. The 3201 Series also includes the (3201MI) monochrome and (3201CI) color terminals which interface with the dealer's in-house computer system.
- The Ford DCS/COIN Finance & Insurance system was developed by COIN for Ford Dealer Computer Services with the design assistance of Ford Credit and Ford Life. Designed specifically for Ford and Lincoln Mercury Dealers, Ford DCS/COIN is offered on hardware from several manufacturers including: Texas Instruments. The System can be configured into single user and multi-user systems depending on the size of the dealership.
- COIN also offers the 160 series for smaller dealerships.
- COIN's 160SE is a single user, 10 megabyte, microcomputer starter system based on Wyse equipment. The COIN 160SE can operate alone or in a network.
- The COIN 160STC offers high resolution graphics, but is otherwise identical to a 160SE.
- The COIN 160W is a system designed for small to mid-sized dealerships. The 160W is a four user system based on Esprit processors, Wyse terminals and NEC printers. IBM Personal Computers and Texas Instruments Professional Computers can also be connected to the system.
- COIN's 160EC is a sixteen user version of the 160W.
- Coin's products for Ford Credit Britain are based on the IBM Personal System 2 Model 30.
- COIN offers optional software for its turnkey systems. Optional software programs can be defined by the user, and allow the system's operator to design custom report formats. Optional software available includes the following:
 - Prospect Management is a customer tracking program which includes standard prospect tracking reports and allows custom reports. Dealership management can use Prospect

Management to monitor floor traffic, evaluate advertising effectiveness and track potential trade-ins.

- CSI Letters allow the dealer to keep in touch with customers and prospects through follow-up letters on a long term basis. The dealership may use COIN's standard reports or use their own custom formats.
- Salesperson Performance Reports form an electronic motivation board to track salesman performance
- Other optional software includes Kelley Blue Book lookup, a Desking System, Residual Depreciation Tables, Deal Status reports, the Translator, an interface connecting the COIN system to the dealer's in-house computer, and ISAAC. ISAAC develops a computerized personality profile on prospects through color choice analysis. This analysis tells the salesman what the customer is looking for, and also acts as an ice-breaker by putting the customer at ease.

COIN's banking products, Smart Lending™, Account Consultant[®], and Application Manager™ automate lending departments and speed up the loan process by reducing paperwork and labor.

- Application Manager makes possible the approval or rejection of car loans in a matter of minutes. The package also automatically identifies risky loans, thereby achieving significant savings by eliminating the generation of unnecessary credit bureau reports.
- Smart Lending is a loan automation package which eliminates a great deal of tedious paperwork while significantly reducing the time needed for credit approval for loans. Account Consultant™ automates the process of establishing new bank accounts.
- COIN's Banking Division products are based on the IBM Personal System 2 series, including the Model 25, the Model 30, the Model 30/286, the Model 60 and the Model 80. NEC, Fujitsu and HP Laserjet printers are used in these systems, as is Novell network software.

COIN is developing COINLink™, an electronic banking network designed to connect the many computers used in the consumer finance market.

- To facilitate the operation of COINLink, COIN has signed a co-marketing agreement with Metroteller, Inc., a subsidiary of Empire Bank of New York.

Industry Markets

COIN derived approximately 93% of fiscal 1988 revenue from automotive dealers. The remaining 7% was derived from banking institutions.

Geographic Markets

COIN's direct sales force sells throughout the U.S. from its headquarters office and from an office in Santa Clara (CA). COIN handles its international sales through its office in St. Albans in the U.K.

Computer Hardware and Software

COIN maintains a Prime 9750, a Prime 2755, and a Prime 4150 at its headquarters, all running the PRIMOS operating system.

COMPANY PROFILE

COIN FINANCIAL SYSTEMS

5555 Oakbrook Parkway
Building 500
Norcross, GA 30093
(404) 447-6103

Mark Singleton, President
Private Company
Total Employees: 250
Total Revenue, Fiscal Year End
7/31/85: \$22.5 Million*

THE COMPANY

- COIN Financial Systems, originally formed in 1969 as Creative Software, Inc., provides turnkey systems for automotive dealers.
- As of February 1986, COIN had 250 employees, segmented as follows:

Marketing/sales	60
Customer support/software services	150
Installation	20
General and administrative	<u>20</u>
	250

- Major competitors include Oakleaf Corporation, Reynolds and Reynolds, and Automatic Data Processing.

KEY PRODUCTS AND SERVICES

- COIN derived all of its fiscal 1985 revenue from turnkey systems sales.
- COIN turnkey systems are based on COIN's Financial and Insurance (F&I) Selling software. COIN F&I systems automate the front end of dealerships by assisting the salesperson in selling the dealership's insurance policies and finance plans.
 - All input information can be customized for each dealership so that monthly payments can be calculated according to dealership policies and state and federal regulations.
 - The systems allow complicated calculations of payment variables to be pre-programmed and also allow the salesperson to change price, trade-in, cash, interest rate or the loan term of a deal to tailor it to the customer's monthly budget.
 - Color graphics, including Payment Protection Comparison, Savings on Fuel, and Cash Purchase Versus Finance Comparison, allow the salesperson to show customers the benefits.

*INPUT estimate

COIN FINANCIAL SYSTEMS

- COIN F&I systems are based on hardware from a variety of manufacturers including IBM, Wyse Technology, Texas Instruments, and NEC. Currently, the company offers six COIN F&I systems as follows:
 - COIN 160SE is a single user, 10 Mbyte microcomputer starter system based on Wyse equipment. COIN 160SE can operate alone or in a network.
 - COIN 160STC, similar to a COIN 160SE, offers high resolution graphics. The COIN 160STC can operate alone or in a network.
 - COIN 160W, designed for mid-sized dealerships, is a four user system based on Esprit processors, Wyse terminals, and NEC printers. IBM Personal Computers and Texas Instruments Professionals can also be connected to the system.
 - COIN 160EC is similar to the COIN 160W except that it supports up to 16 users.
 - The VWofA/COIN Finance & Insurance System was developed by COIN specifically for Volkswagen of America. The VWofA/COIN system, based on IBM equipment, is a single user station that can operate alone or in conjunction with in-house IBM computers. VWofA/COIN includes COIN's optional V-TRAK and Finance & Insurance Summary/Report software programs (described below).
 - The Ford DCS/COIN Finance & Insurance System was developed by COIN for Ford Dealer Computer Services with the design assistance of Ford Credit and Ford Life. Designed specifically for Ford and Lincoln-Mercury dealers, FORD DCS/COIN is offered on hardware from several manufacturers including Texas Instruments. FORD DCS/COIN can be configured into single user or multi user systems depending on the size of the dealership.
 - COIN has more than 1,600 turnkey system installations across the U.S.
- COIN offers optional software for its turnkey systems. Optional software programs are user defined which allows the system's operator to design the report formats. Optional software available includes the following:
 - F&I Summary/Report enables the F&I manager to obtain up-to-date profit information on a month-to-date basis. A letter writer report allows the dealership to send thank you letters to car buyers.
 - C-TRAK, a customer tracking program, allows dealership management to monitor floor traffic, evaluate the effectiveness of advertising in drawing customers, and keep track of potential trade-ins.
 - V-TRAK, a vehicle tracking program, allows sales managers to keep an account of new and used vehicle inventories.

COIN FINANCIAL SYSTEMS

- S-TRAK gives management a historical overview of sales by day, week, or month. S-TRAK enables sales managers to analyze salespeople's individual sales performances.
- L-TRAK is a lease tracking program very similar to S-TRAK.
- D-TRAK, a dealer tracking program, interfaces with S-TRAK and C-TRAK to give management access to five areas that affect profitability. D-TRAK monitors sold units and gross profits by salesperson, customer sources, insurance penetration, and ups ratio.
- COIN's Spreadsheet program allows the dealer to accomplish analysis and financial forecasting and can be used in conjunction with C-TRAK and S-TRAK to measure dealership performance.
- COIN's Word Processing program allows dealerships to design and develop direct mail and follow-up programs. The program includes Mailing List software that can interface with C-TRAK and S-TRAK to produce customized letters.

INDUSTRY MARKETS

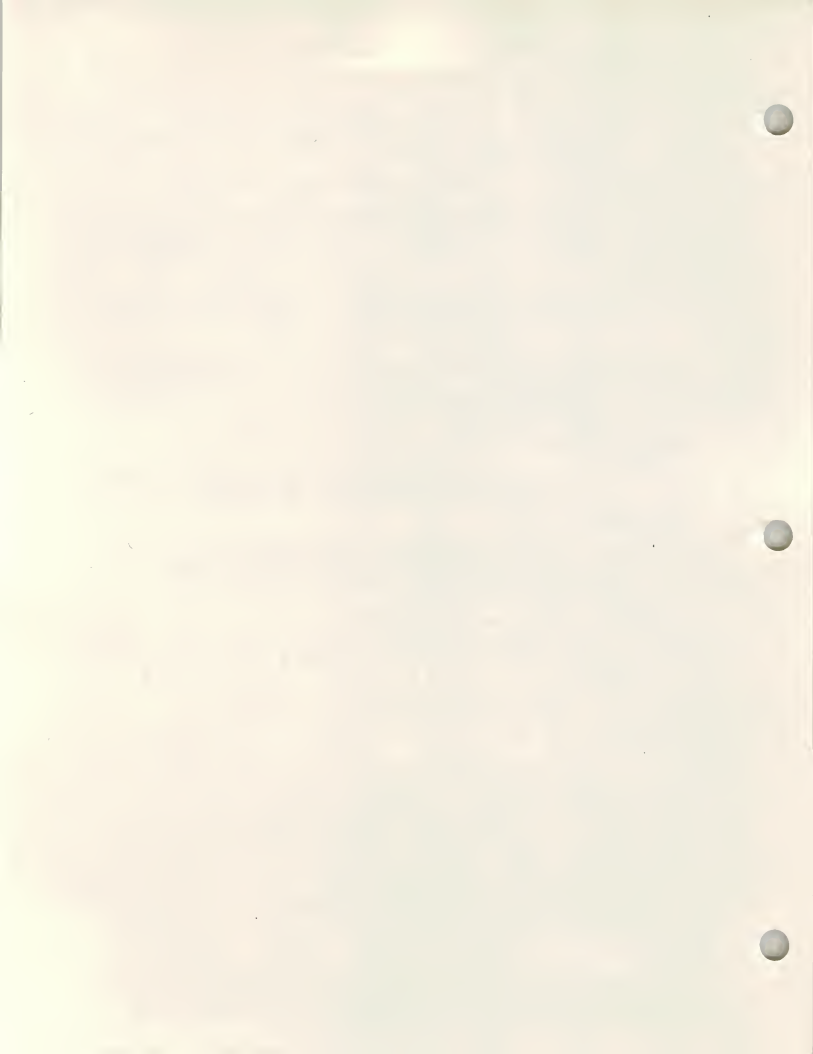
- COIN derived approximately 95% of fiscal 1985 revenue from automotive dealers. The remaining 5% was derived from leasing institutions.

GEOGRAPHIC MARKETS

- All of COIN's fiscal 1985 revenue was derived from the U.S. COIN's direct sales force sells throughout the U.S. from its headquarters office and a sales office located in Irvine (CA).

COMPUTER HARDWARE AND SOFTWARE

- COIN maintains a PRIME 9750 running the PRIMOS operating system at its headquarters.



COMPANY PROFILE

COLLIER-JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607
(813) 872-9990

Charles W. Jackson, President
Private Corporation
Total Employees: 150
Total Revenue, Fiscal Year End
12/31/86: \$15,000,000*

THE COMPANY

- Collier-Jackson, Inc. was founded by Charles W. Jackson in 1975. The company develops, markets, and supports cross industry software packages for financial, purchasing, and human resource management applications, as well as specific products for the newspaper industry. Collier-Jackson also provides professional services involving education, training, implementation assistance, and customization of its software packages.
- For its newspaper systems, the company has agreements with Hewlett-Packard and DEC as follows:
 - Since 1976 Collier-Jackson has been an original equipment manufacturer (OEM) for Hewlett-Packard.
 - In 1983 the company became an OEM for DEC.
 - In 1987 Collier-Jackson became DEC's first Systems Cooperative Marketing Partner (SCMP) for the media industry.
- For its financial systems, the company has agreements as follows:
 - In 1986 Collier-Jackson was designated a National Account HP3000 Software Supplier.
 - In 1987 Collier-Jackson became a Cooperative Marketing Partner (CMP) with DEC.
- Currently, the company has approximately 150 employees.
- Collier-Jackson's major competitors include various regional and national firms.

KEY PRODUCTS AND SERVICES

- Approximately 58% of 1986 revenue was derived from software packages and 8% was from professional services. The remaining 35% was derived from hardware product sales and maintenance services.

EXHIBIT

COLLIER-JACKSON, Inc.
SOFTWARE PRODUCTS

PRODUCT	DESCRIPTION	PRICE	NUMBER INSTALLED
<u>FINANCIAL APPLICATIONS</u>			
CJ /ADVANCED GENERAL LEDGER™	General ledger and financial reporting system	\$21,500	350
CJ/ACCOUNTS PAYABLE™	Expense management system	\$15,000	250
CJ/ACCOUNTS RECEIVABLE™	Accounts receivable and cash forecasting system	\$15,000	100
CJ/FIXED ASSETS™	Fixed assets and property management system	\$24,000	130
CJ/PURCHASING™	Vendor management, procurement control & reporting system	\$15,000	New
CJ/REPORT WRITER™	Report writing system	\$7,500	225
CJ/EXECULINK™	Provides download capabilities between mainframe-to-micro	\$2,000 per PC	100
<u>HUMAN RESOURCE APPLICATIONS</u>			
CJ/PAYROLL™	Payroll processing and reporting system	\$17,500	375
CJ/PERSONNEL™	Human resource management system	\$18,500	130
CJ/EMPLOYEE FUND ADMINISTRATION™	Employee fund tracking, recording and controlling system	\$7,500	30
<u>NEWSPAPER MANAGEMENT SYSTEMS</u>			
CJ/CIRCULATION™	Information gathering system	\$45,000- \$115,000	130
CJ/ADVERTISING™	Advertising process integrating system	\$30,000- \$95,000	120
CJ/CLASSIFIED™	Current information tracking system	\$6,500- \$22,000	100
CJ/AD TRACKING™	Workflow reporting system	\$6,500- \$24,000	10
CJ/LAYOUT™	Dummied ad producing system	\$9,500- \$18,000	30
CJ/NEWSPRINT™	Production cost tracking system	\$9,500- \$30,500	30

- Collier-Jackson's products are available for the HP 3000 series (running under MPE) and the DEC VAX series (running under VMS) minicomputers. All software products available from the company are listed in the exhibit.
 - Currently there are 2,100 systems installed nationwide.
- Collier-Jackson provides education, training, and customer support services.
 - Systems education classes are held at Collier-Jackson's corporate office in Tampa.
 - The CJI HOTLINE is available to assist with emergency problems during business and non-business hours.

INDUSTRY MARKETS

- Approximately 40% of the company's 1986 revenue was from the newspaper industry. The remaining 60% was derived from various industries.
- Major clients include Hewlett-Packard, DEC, Compaq Computer, Celanese Chemical, Knight-Ridder Corporation, Copley Computer Service, and the Dallas Times.

GEOGRAPHIC MARKETS

- One hundred percent of Collier-Jackson's 1986 revenue is derived from the U.S.
- Sales offices are located in San Francisco, Los Angeles, Minneapolis, Boston, and New Jersey.

COMPUTER HARDWARE AND SOFTWARE

- Collier-Jackson has the following computers installed at its headquarters in Tampa:
 - 1 DEC VAX 8500, VMS.
 - 2 HP 3000s, MPE-V.
 - 2 HP 3000 37s, MPE-V.
- Regional offices are each equipped with an HP3000-37.

*Purchased
by Citibank*

COMPANY HIGHLIGHT

COLORADO COMPUTER CENTER, INC.

1080 Cherokee
Denver, CO 80204
(303) 534-6622

L. R. Kintzele, Jr., President
Private corporation
Total employees: 85
Total revenues, fiscal year end
12/31/78: \$3,600,000*

THE COMPANY

- Founded in 1969 by Mr. Kintzele, Colorado Computer Center, Inc. (CCC) provides services to small and medium size banks in the Colorado area.
- Revenues have grown approximately 18% per year from \$2.2 million in fiscal 1975 to \$3.6 million in fiscal 1978.

KEY PRODUCTS AND SERVICES

- Approximately 85% of CCC services are offered in batch mode and 15% in interactive mode.
- CCC provides the following processing services:
 - Demand deposit account
 - Certificate of deposit
 - Loan accounting
 - Savings accounting
 - EFTS
 - General ledger
 - Audit

APPLICATIONS All CCC services are specialty services for the financial industry.

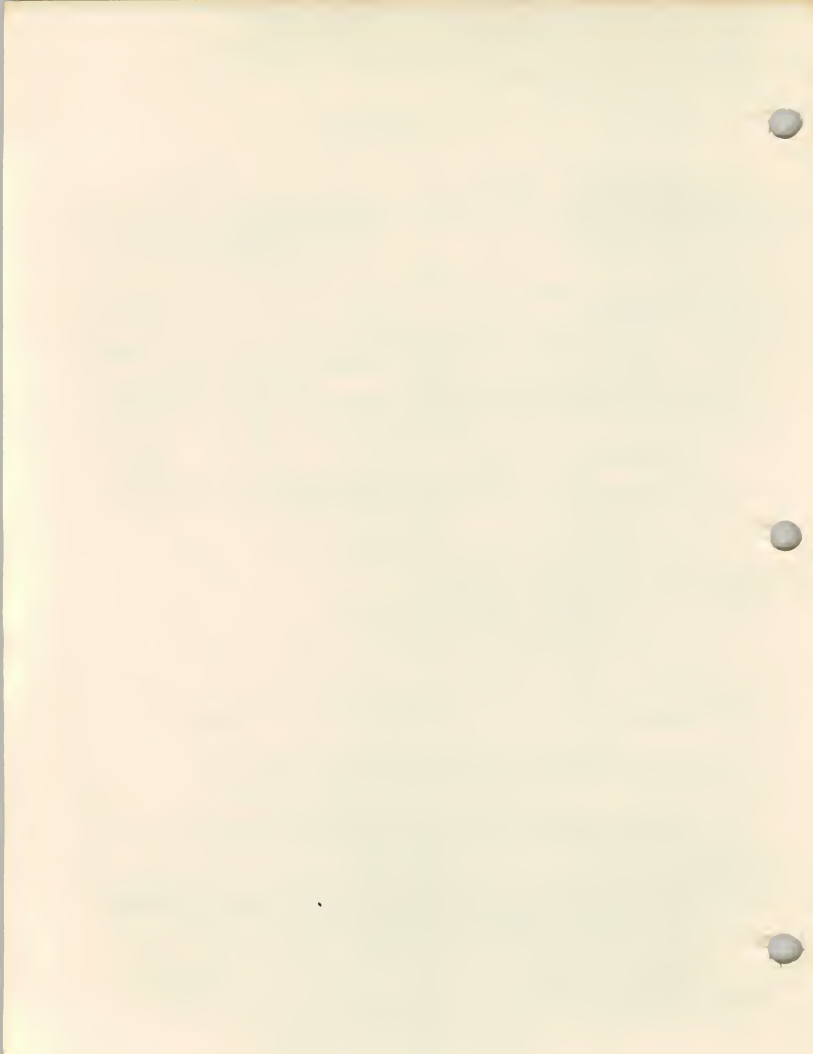
INDUSTRY MARKETS CCC has approximately 130 commercial and industrial bank users.

GEOGRAPHIC MARKETS Customers are concentrated in the Mountain States, primarily Colorado. CCC's only office is in Denver.

COMPUTER HARDWARE AND SOFTWARE All processing is performed on two IBM System/370 Model 145s running under DOS/VS/CICS.

*Management estimate

March 1979



COMPANY HIGHLIGHT

COLORADO COMPUTER CENTER, INC.
2442 S. Downing
Denver, Colorado 80210
(303) 778-1808

L. R. Kintzele, Jr., President
Private Corporation

Total Company and Computer Services Sales
as of FY ending 12/75: \$2.2 million

NUMBER OF EMPLOYEES engaged in computer services: 66

KEY PRODUCTS/SERVICES: CCC markets solely batch services.

APPLICATIONS: General business applications such as demand deposit accounting, certificate of deposit, loan and savings functions, are tailored to the banking industry.

INDUSTRY MARKETS: CCC sales are derived solely from the banking industry.

GEOGRAPHIC MARKETS: Some 50 bank customers are concentrated in the Western region of the U.S., primarily around Denver. CCC has offices only in Denver.

COMPUTER HARDWARE AND SOFTWARE: Batch processing is performed on:

2	IBM	370/135	DOS/VS/CICS
---	-----	---------	-------------

OVERALL ASSESSMENT AND TRENDS: Founded in 1969 by Mr. Kintzele, CCC services small to medium size banks in the greater Denver area. Its board is made up of bank presidents but who have no ownership. CCC claims its advantage in the Denver area is that only a quarter of the large banks perform correspondent banking.

June/1976

H-27.1

INPUT

**COMDATA HOLDINGS
CORPORATION**

5301 Maryland Way
Brentwood, TN 37027
Phone: (615) 370-7000

Chairman & CEO: George L. McTavish
President & COO: Edward A. Barbieri
Status: Public
Stock Exchange: NASDAQ
Total Employees: 1,700 (9/92)
Total Revenue: \$184,468,000
Fiscal Year End: 12/31/91

Key Points

- Comdata is a leading provider of electronic transaction and information processing services to the trucking industry. Each service is designed to enhance the business operations and efficiency of trucking customers and truck stops across the country. In recent years, the company has extended its products and services to the consumer and retail markets.
- Comdata's operating strategy is to maintain its current core business by providing better service to its customers and by using its advantage in size, technological capabilities, and diverse product line. The company also intends to use its existing computer network and customer base, together with strategic alliances, to develop new services that address the key issues in the markets it serves.
- During 1991, Comdata entered into several significant agreements/alliances:
 - Outsourcing virtually all of its data processing operations to IBM's Integrated Systems Solutions Corporation under a ten-year agreement
 - Outsourcing certain marketing and field operations of its cash advance services at gaming facilities to Players International
 - Selecting Advanced Telecommunications Corporation as Comdata's primary provider of long-distance telephone services

**Company
Description**

Comdata currently provides a range of processing services to the transportation, leisure and gaming, and retail industries through the following divisions:

- Transportation Services, headquartered in Brentwood (TN) with 1,400 employees, provides funds transfer services, fuel purchase programs, backhaul information, driver communications services, and regulatory permit transmission services to the trucking industry.
- Consumer/Retail Services, based in Brentwood with 40 employees, provides credit card cash advance services to individuals for personal and emergency reasons and check verification, check guarantee, and collections services for various retailers in the U.S.
- Telecommunications Services, headquartered in Brentwood with ten dedicated employees, provides volume discounts for AT&T and Advanced Telecommunications Corporation long-distance charges through the pooling of telephone billings to Comdata's trucking and other customers.

Financials

Comdata's 1991 revenue was \$184.5 million, a 3% decline from 1990 revenue of \$189.8 million.

- Net losses were \$10.5 million, compared to net losses in 1990 of \$40.8 million. Results for 1990 include one-time charges of \$28.4 million for payments to First Data Resources/American Express associated with terminating a 1989 noncompete agreement, and expensing the unamortized costs related to certain other non-compete agreements.
- A four-year financial summary follows:

**COMDATA HOLDINGS CORPORATION
FOUR-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR			
	1991	1990	1989	1988
Revenue	\$184.5	\$189.8	\$159.0	\$111.3
• Percent change from previous year	(3%)	19%	43%	*
Income (loss) before taxes (a)	\$(11.4)	\$(40.8)	\$(14.5)	\$(9.9)
• Percent change from previous year	72%	(b) (181%)	(46%)	*
Net income (loss)	\$(10.5)	\$(40.8)	\$(11.7)	\$(8.8)
• Percent change from previous year	74%	(249%)	(33%)	*
Earnings (loss) per common share	\$(0.26)	\$(1.00)	\$(0.35)	\$(0.29)
• Percent change from previous year	74%	(186%)	(21%)	*

* Results not comparable to prior period.

(a) Includes interest expenses of \$38.8 million, \$40.8 million, \$37.8 million, and \$30.1 million for 1991, 1990, 1989, and 1988, respectively.

(b) Includes one-time charges of \$28.4 million.

Results for 1991 were attributed to the following:

- Revenues from products and services provided to the trucking industry declined 5% due to the impact of the weak economy, which resulted in a lower demand for Comdata's services from its trucking customers, and increased competition.
- Gaming and leisure cash advance revenues rose 9% due to an increase in transaction fees.
- Retail check payment services revenues decreased after two large customers in the California market reduced the scope of their business with Comdata from authorization and guarantee services to collection services.

Revenue for the six months ending June 30, 1992 reached \$94.9 million, a 5% increase over \$90.3 million for the same period in 1991. Net losses for the period were \$653,000, compared to a \$1.3 million loss for the comparable period in 1991.

- For the quarter ending June 30, 1992, Comdata reported the highest second-quarter earnings since 1987. Net income was \$647,000, compared to \$263,000 in the second quarter of 1991. Operating costs were lower, due primarily to the benefits gained from outsourcing agreements entered into during 1991.

Acquisitions

In December 1991, Comdata acquired the Permicom Companies, three affiliated permit companies located in Ontario and Quebec (Canada), for an aggregate purchase price of approximately \$0.9 million in cash and \$0.9 million in deferred payments.

- The companies, Stats CAVR, Inc., Permicom Permit Services, Inc., and Stats Plus Transportation Data Services, Inc., with combined annual revenue of over \$2 million, provide fuel tax reporting, permits, and other services to the transportation industry.
- These operations have been merged into Comdata's Transportation Services Division.

Alliances/ Agreements

In September 1991, Comdata entered into a ten-year agreement for systems operations services with IBM's Integrated Systems Solutions Corporation (ISSC) whereby ISSC operates and manages substantially all data processing functions involved in Comdata's operations.

- In connection with the agreement, ISSC paid \$15 million in cash to Comdata and assumed certain lease obligations in order to acquire computer equipment, to acquire the right to extend employment to certain Comdata employees, to obtain access to and use Comdata facilities, and to reimburse certain transition expenses to be incurred by Comdata.
- Minimum annual expenses for ISSC services are expected to be \$8.4 million in 1992, \$9.3 million in 1993, and \$9.8 million in 1994.

In September 1991, Comdata entered into a Telecommunications Service Agreement with Advanced Telecommunications Corporation (ATC) whereby ATC has become Comdata's primary provider of long-distance telephone services through 1998.

- The agreement expands Comdata's offerings in providing volume discounts for long-distance services to Comdata trucking and other customers.
- Comdata also issued 560,000 shares of Comdata Preferred Stock to ATC at \$25 per share, resulting in proceeds of \$14 million.

In August 1991, Comdata entered into an agreement with PCI, Inc. (a subsidiary of Players International, Inc.) whereby PCI assumed responsibility for the sales, marketing, and field operations of Comdata's cash advance service in gaming facilities. Approximately 125 employees of Comdata became PCI employees.

Since 1990, Comdata has been a value-added remarketer of CoveragePLUS™, Motorola's real-time vehicular communications and tracking system.

Competitors

Major competition for funds transfer services comes from NTS and Cummins Cash and Information Services. Check verification and collection competitors include Telecredit, Comp-U-Check, and other regional companies.

Key Products and Services

Approximately 93% of Comdata's 1991 revenue was derived from transaction processing services in support of funds transfer, permit issuance, and check verification and collection (check payment) services. About 7% of revenue was derived from volume discount long-distance (\$8 million) and other telecommunications services.

A further breakdown of Comdata's revenue by application area follows:

COMDATA HOLDINGS CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR					
	1991		1990		1989	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Funds transfer						
- Trucking	\$67.2	36%	\$72.0	38%	\$69.5	44%
- Consumer	\$66.0	36%	\$60.4	32%	\$38.5	24%
	\$133.2	72%	\$132.4	70%	\$108.0	68%
Permit services	\$23.2	13%	\$25.0	13%	\$24.2	15%
Check payment services	\$11.0	6%	\$16.5	9%	\$19.3	12%
Other trucking services	\$3.9	2%	\$3.6	2%	\$3.8	2%
Telecommunications	\$13.2	7%	\$12.3	6%	\$3.7	2%
TOTAL	\$184.5	100%	\$189.8	100%	\$159.0	100%

Trucking Industry Services:

Comdata provides funds transfer services, fuel purchase programs, backhaul information, in-truck communications services, telecommunications services, and permit services to the trucking industry. During 1991, Comdata processed about 27 million funds transfer transactions valued at \$4.3 billion for approximately 11,000 trucking company customers.

Comdata's basic funds transfer system is centered around a Comchek[®], a draft payable through a Comdata bank account.

- Comdata maintains a national network of over 9,000 service centers for distribution of Comcheks and the performance of various other services. Comdata maintains point-of-sale devices in most of its service centers to facilitate communication with its data base and operations centers.
- When a request is made by a driver at a truck stop or other location, Comdata's network initially verifies that the driver's company has established sufficient credit, then notifies the appropriate service center (either verbally or electronically) as to the amounts and recipients of any requested drafts.
- When the payee provides proper identification, the service center obtains an authorization number from Comdata for a requested draft and then may cash the Comchek draft. The recipient may also cash the draft at locations other than service centers.
- Payments covering Comchek drafts and the applicable service charges are often made by trucking company customers on the day following a given transaction either by wire transfer of funds or by check.
- More than 80% of Comdata's funds transfer transactions are now fully automated and occur without the need for intervention by Comdata employees.

The Comdata Express Check service is designed to increase the speed of funds transfer and decrease associated communications expenses.

- Truckers are furnished with a supply of blank Comchek drafts and may issue their own Comcheks upon obtaining an express code from the trucking company customer. The express code contains the customer's identity and the amount the individual is authorized to obtain.

- The trucker enters the code and other specified information on the Comchek draft and presents the draft to a service center, which calls Comdata to obtain an authorization number for the transaction.

Comdata also offers a identification card system for fuel purchases and other services. The trucking company employee is given a fuel purchase identification card that may be used at a truck stop or other service center.

- In about 80% of all fuel purchase transactions, the card is read by a POS device, the cashier enters certain information about the purchase and the proposed transaction is confirmed and approved electronically by Comdata's computers. If a service center does not have a POS device, a cashier will call Comdata for approval.
- Trucking customers have access to Comdata's data base and may obtain information on recent transactions by their employees.

The Comchek Alliance Program is a fuel purchase and fuel tax reporting service.

- As part of the program, participating service centers may offer rebates to all of Comdata's customers that obtain fuel at their locations. The program also tracks and reports data concerning direct billing relationships between service centers and trucking companies, as well as fuel purchase identification card transactions. Comdata charges a transaction fee to the trucking company and, in some cases, to the service center.
- Each time the Comchek card is used during a fuel transaction, information (location of fueling, quantity, cost, type, etc.) is automatically collected and entered on an Alliance Workstation or PC using Comdata software. Comdata merges the fuel and trip information files with fuel tax software programs to accurately report tax liabilities for each state. Comdata completes all appropriate state tax forms and delivers them to each customer.

Express Cash, Comdata's driver funds management service, allows carriers to automate all payments or advances for their drivers--including payroll or settlements, trip advances, and miscellaneous advances. Using a Comchek card as identification, drivers can access their payroll funds at any of Comdata's 9,000 Comchek Service Centers.

The Comchek Phone Card is an identification card that can be used as a telephone credit card, as well as a fuel purchase card that provides cost control features to its customers. The trucking company can preprogram which locations its drivers may call and the number of calls

allowed. Revenues from this service were \$5.4 million in 1991, \$4.9 million in 1990, and \$3.3 million in 1989.

Comchek LoadMatcher (formerly COMVOY) is an on-line data base of trucks and loads available across the U.S. and Canada. The service is designed to reduce empty backhauls by making specific shipment information available to trucking company customers. This program generated \$3.2 million in revenues in 1991.

Comdata is the largest issuer of temporary transportation permits in North America. Fax machines are installed at 1,200 truck stops in North America to assist trucking companies in obtaining necessary state vehicle permits along their planned routes.

- During 1991, Comdata processed more than 1.5 million permits.
- The ACCEL™ Legalization System, introduced in June 1990, is a distributed system installed at the client's site for initiating, ordering, tracking, and processing size, weight and other specialized permits via Comdata's data center in Carrollton (TX). There are currently over 50 ACCEL Legalization Systems installed.

DriverLink/24™ is an in-truck voice and data communications system developed by Comdata as a value-added remarketer for Motorola's CoveragePLUS product. DriverLink/24 allows a trucking company to communicate with drivers while in transit by voice, voice mail, text message, and/or status messages.

Trans-Link™ is a direct billing service offered by Comdata that was designed in cooperation with the National Association of Truck Stop Operators (NATSO) for its truck stop members. Comdata also provides similar direct billing services to non-NATSO members.

As a result of the acquisition of Fleetline in May 1989, Comdata also provides fuel tax reporting, driver log auditing, and audio and video tape training for trucking company drivers and management.

Consumer/Retail Services:

Comdata Consumer Services provides cash advance services to individuals for personal and emergency reasons and check authorization and guarantee services to retailers.

Individuals may use MasterCard, VISA, or Discover credit cards at Comchek service centers to obtain cash. During 1991, Comdata completed five million credit card cash advance transactions with a face value of \$1.5 billion.

- Authorization of the amount requested is confirmed by terminals that have access to MasterCard, VISA, or Discover authorization files.
- Once authorization is confirmed, Comdata either manually or electronically calls the service center and supplies a Comchek authorization number. The service center issues a Comchek draft payable to the recipient. Generally, the recipient endorses the draft and obtains cash from the service center.
- The amount received by the cardholder, along with Comdata's service fee, is charged to the individual's credit card account. Comdata pays a commission to the casino, racetrack, or similar service center for each transaction.
- These credit card services are currently available in over 340 legalized gambling casinos, including a majority of the casinos in Las Vegas, Reno, and Lake Tahoe (NV) and Atlantic City (NJ) and in more than 400 other gaming locations.
- Sales, marketing, and field operations for these services are provided by PCI, Inc.

Comdata provides check verification and collection services to approximately 190 retailers (primarily grocery stores) in the metropolitan areas of Atlanta, St. Louis, most of California north of San Diego, central Pennsylvania, and, to a limited degree, in other parts of the U.S. These services are currently marketed under the trademarks Cashex and Honest Face. During 1991, Comdata processed 43 million checks, credit, or debit transactions with a face value of \$2.8 billion.

- Comdata also provides mail and telephone collection services for returned checks.
- The Integrated Payment System (IPS), an automated in-lane payment system for supermarkets that accepts credit and debit cards as well as authorizes checks through a single device. IPS also provides a platform for future services, such as frequent shopper incentives, electronic couponing, and other special promotions.

Telecommunications Services:

Comdata customers can consolidate their inbound and outbound long distance phone usage through Comdata. Because of the discounts available to volume purchasers, customers realize significant savings on their long-distance costs.

- Under Comdata's NewCom™ service, Comdata acts as a value-added reseller of AT&T's communications services. Subscribing businesses participate in discounts that increase in proportion to their own monthly calling volume. The service also includes centralized network management and disaster planning and backup. This service generated revenues of \$8 million in 1991.
- NewComPLUS™, introduced in 1992, provides services similar to NewCom through a second common carrier, Advanced Telecommunications Corporation.

Industry Markets

Comdata's 1991 revenue was derived as follows:

Transportation industry	58%
Credit cardholders	36%
Retail establishments	6%
	100%

Comdata's trucking company customers range in size from those with several thousand trucks to small companies with fewer than five trucks.

- The majority of Comdata's trucking company customers are common carriers, as opposed to private fleets. Many common carriers do not employ their drivers, but instead contract with them individually as owner-operators. Such owner-operators usually settle their expenses with the common carrier after the completion of each trip.

During 1991, nine customers accounted for over 75% of revenue from Comdata's check payment services. Major customers include Kmart, Shop'n Save, Giant, Kroger, Safeway West, and Lucky Stores.

Geographic Markets

Virtually 100% of Comdata's 1991 revenue was derived from the U.S.

In addition to its headquarters in Brentwood (TN), Comdata has offices in the metropolitan areas of Atlanta, Dallas, and Los Angeles.

Comdata has over 13,000 service centers in North America.

Computer Hardware and Software

Virtually all of Comdata's processing operations have been outsourced to IBM Integrated Systems Solutions Corporation.

Comdata's data centers in Brentwood, Brea (CA), Dallas (TX), and Atlanta (GA) have various mainframes, midrange systems, and microcomputers installed in support of their various operations.

COMPANY PROFILE

COMDATA HOLDINGS CORPORATION

5301 Maryland Way
Brentwood, TN 37027
(615) 370-7000

George L. McTavish, President and CEO
Public Corporation, OTC
Total Employees: 1,900
Total Revenue, Fiscal Year End
12/31/89: \$158,974,000

The Company

Comdata Holdings Corporation (Comdata) currently provides a range of processing services to the transportation, leisure and gaming, and retail industries through the following divisions:

- **Transportation Services**, headquartered in Brentwood (TN) with 1,050 employees, provides funds transfer and other information management processing services to trucking companies.
- **The Transceiver Network**, based in Carrollton (TX) with 350 employees nationwide, is the largest issuer of temporary transportation permits in North America. The division also provides routing, reporting, and other information management services to trucking companies.
- **Consumer Services**, based in Brentwood with more than 100 employees, provides credit card cash advance services to individuals for personal and emergency reasons.
- **Retail Services**, headquartered in Brentwood with 225 employees nationwide, provides check verification, check guarantee, and collections services for various retailers in the U.S.
- **Telecommunications Services**, headquartered in Brentwood with 15 employees, was formed in late 1989. The division provides volume discounts for AT&T long distance charges through the pooling of telephone billings to Comdata's trucking and other customers.

In September 1987, Comdata was restructured through a leveraged recapitalization initiated by the partnership of Welsh, Carson, Anderson & Stowe (WCAS IV).

- Comdata Network, Inc. was acquired by newly formed Comdata Holdings Corporation on September 9, 1987 for a total

acquisition cost of approximately \$327 million. Comdata's financial data for 1987 is split between pre- and post-acquisition time periods due to a change in capital structure.

- In March 1990, Comdata completed the private placement of 8.1 million unregistered common shares with institutional investors, raising \$36.5 million in new capital to be used to support existing business and finance future growth.
- WCAS IV and other institutional investors currently own 77% of Comdata's outstanding common shares.

Acquisitions made by Comdata include the following:

- In April 1990, Comdata acquired Cal Permits Inc. and Truckers Network, Inc., both San Bernardino (CA)-based providers of regulatory permitting services for over-the-road trucks in California. Both companies were privately held and owned by the same party. The operations of these companies have been merged into Comdata's Transceiver Network division.
- In June 1989, Comdata acquired three business operations from First Data Resources (FDR)/American Express for \$57.2 million plus additional payments of \$19 million made during 1990.
 - The acquisition included FDR's Financial and Communications Services and Cashchek International divisions and FundsNet Inc. These businesses offer funds transfer and information processing services to the transportation, leisure, and gaming industries. Their operations have been merged into Comdata's Transportation Services and Consumer Services divisions.
 - As part of the acquisition, Comdata entered into a noncompete agreement with FDR/American Express agreeing to pay \$47 million to FDR over six years. Comdata prepaid the noncompete obligation in June 1990.
- In May 1989, Comdata acquired Fleetline Transportation Services, Inc. of Cincinnati (OH). Fleetline provided various services to the trucking industry, including permit, fuel tax reporting, and training. Its operations have been merged into Comdata's Transceiver Network division.
- In December 1988, Comdata acquired American Facsimile Systems, Inc. (AFSI) of Carrollton (TX) for approximately

seven million shares of Comdata common stock and cash and notes of \$16 million.

- AFSI operated the Transceiver Network, a nationwide permit transmission service for the trucking industry.
- The transaction was accounted for as a pooling of interests and Comdata's financials for 1987 and 1988 were restated to include the results of AFSI.
- The operations of AFSI were merged with Comdata's permit services to form the Transceiver Network division.

In October 1990, Comdata reported its first quarterly profit since the company completed its leveraged recapitalization in September 1987. Net income for the three months ending September 30, 1990 was \$688,000, compared to losses of nearly \$1.9 million for the same period in 1989.

- Comdata's return to profitability followed the June prepayment of the noncompete obligation with American Express. With that obligation satisfied, the company's quarterly amortization expenses have declined significantly.
- Revenue for the nine months ending September 30, 1990 reached \$143.8 million, a 27% increase over \$113.5 million for the same period in 1989.
- Net losses of \$35.1 million for the nine months include the special second-quarter charge of approximately \$30 million related to the repayment of the noncompete obligation and other one-time charges.

Calendar 1989 revenue reached \$159 million, a 43% increase over 1988 revenue of \$111.3 million. Net losses for 1989 were \$11.7 million compared to losses of \$8.8 million in 1988. In the five-year summary that follows, financials for 1988 and 1987 have been restated to reflect the pooling of interests acquisition of AFSI.

**COMDATA HOLDINGS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR					
	12/89	12/88	9/10/87- 12/31/87 (a)	1/1/87- 9/9/87 (a)	12/86	12/85
Revenue	\$159.0	\$111.3	\$34.7	\$68.4	\$86.6	\$91.7
• Percent change from previous year	43%	*	*	*	(6%)	13%
Income (loss) before taxes	\$(14.5)	\$(9.9)	\$(9.2)	\$13.3	\$22.2	\$24.1
• Percent change from previous year	(46%)	*	*	*	(8%)	(5%)
Net income (loss)	\$(11.7)	\$(8.8)	\$(6.2)	\$7.4	\$12.2	\$12.7
• Percent change from previous year	(33%)	*	*	*	(4%)	(4%)
Earnings (loss) per share	\$(0.35)	\$(0.29)	\$(0.21)	\$0.39	\$0.64	\$0.62
• Percent change from previous year	(21%)	*	*	*	3%	(5%)

* Results not comparable to prior periods.

(a) The data for 1987 is split between two periods due to a change in capital structure.

Revenue increases during 1989 were attributed primarily to the acquisition of the funds transfer-related businesses from FDR/American Express in June 1989, as well as the acquisition of AFSI in December of 1988. These acquisitions added approximately \$35 million in revenue to Comdata's existing business in 1989.

- Funds Transfer revenue increased 46% (\$36.6 million) during 1989. Approximately \$27 million of the increase was the result of the businesses acquired from FDR. The remainder of the revenue increase came from existing business, due to the introduction of the Alliance Program in October 1989, as well as an increase in cash advance transactions at leisure and gaming locations.
- Permit Services revenue increased 45% due to the acquisition of certain AFSI licenses in December 1988.
- Retail Check Payment revenue increased 23%.

Net losses during 1989 reflected: acquisition-related costs exceeding operating income contribution, payments made under Comdata's noncompete agreement with FDR/American Express, and restructuring charges of \$1.9 million associated with the relocation of the company's headquarters.

As of December 31, 1989, Comdata had 1,900 employees. The company currently has 2,189 employees worldwide.

Major competition for funds transfer services comes from NTS and Cummins Cash and Information Services. Major credit card companies and vendors of travelers' checks that make cash available to holders of their cards and checks on a nationwide basis are also competitors. Check guarantee competitors include Telecredit, Comp-U-Check, and other regional companies.

Key Products and Services

Virtually 100% of Comdata's 1989 revenue was derived from transaction processing services in support of funds transfer, permit issuance, and check verification and guarantee (check payment) services.

A further breakdown of Comdata's revenue and operating income by application area is shown on the following page.

Transportation Services:

Comdata Transportation Services provides funds transfer, cash advance, return trip loadmatching, telephone services, management reporting, and associated information services to the trucking industry. During 1989, Comdata processed more than 28 million funds transfer and related transactions valued at \$4.3 billion for 9,000 trucking customers.

- The divisions' products are centered around the Comchek^R card, a magnetically encoded card issued for each vehicle in a customer's fleet. The card is used at participating truck stops for fuel purchases, repairs, phone calls, travel cash, and other cash needs--with functions and dollar amount limits predetermined by the trucking company.
- Reports are available summarizing daily information on the amounts of fuel purchased, cash advanced, and repairs ordered.

**COMDATA HOLDINGS CORPORATION
THREE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1989		1988		1987	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Revenue						
Funds transfer						
- Transportation	\$75.8	48%	\$60.0	54%	\$58.3	56%
- Consumer	39.8	25%	19.0	17%	18.2	18%
	\$115.6	73%	\$79.0	71%	\$76.5	74%
Permit services	24.1	15%	16.7	15%	11.5	11%
Check payment services	19.3	12%	15.6	14%	15.1	15%
Total	\$159.0	100%	\$111.3	100%	\$103.1	100%
Income (loss) from operations						
Funds transfer	\$34.6	87%	\$27.5	98%	\$21.3	91%
Permit services	5.6	14%	0.1	--	(1.2)	(5%)
Check payment services	(0.5)	(1%)	0.5	2%	3.3	14%
Total	\$39.7	100%	\$28.1	100%	\$23.4	100%

The Comchek Alliance Fuel Management Service, introduced in October 1989, is Comdata's new fuel purchase and fuel tax reporting service.

- With each Comchek card transaction, Comdata electronically captures data about the trucking company, employee, tractor and trailer unit, as well as details about the type, quantity, and amount of each fuel purchase.
- Comdata provides trucking companies with software for Comdata Alliance Workstations or compatible microcomputers. The software allows the carrier to record driver trip information that accounts for every mile a truck operates. Comdata combines this information with the Comchek fuel purchase data and generates the fuel tax reports.

Express Cash, Comdata's driver funds management service, allows carriers to automate all payments or advances for their drivers--including payroll or settlements, trip advances, and miscellaneous advances. Using a Comchek card as identification, drivers can access their payroll funds at any of Comdata's 9,000 Comchek Service Centers.

Comchek Phone Services provide long distance calling services to drivers from any phone in the U.S. and Canada. Drivers use a toll free 800 number, and enter their Comchek card number and personal security code. All calls are processed through the Comdata central computer and then routed on AT&T lines. The system observes restrictions established by the trucking companies for each driver and provides activity and management reporting.

Load Matcher (formerly COMVOY) is an on-line data base of trucks and loads available across the U.S. and Canada. Load Matcher lists all the opportunities nationwide for trucks and loads available in the geographic location users specify. Details about trailer needs and the loads to be hauled can also be posted. Approximately 5,000 loads and 3,000 trucks are available daily through the data base.

The Comdata Service Center Information System is an on-line data base of more than 6,000 Comchek and 1,700 Alliance Network truck stops. Accessed through the Alliance Workstation or a compatible computer terminal, the system offers general service center information retrieval and fuel price searches.

Transceiver Network:

Comdata Transceiver Network is the largest issuer of temporary transportation permits in North America. Transceiver has 3,500 fax machines installed at 1,200 truck stops in North America to assist trucking companies in obtaining necessary state vehicle permits along their planned routes. During 1989, Comdata processed more than 1.8 million permits.

- Transceiver issues more than 200 different types of regulatory permits serving the 48 contiguous states and five Canadian provinces.
- Transceiver also assists with oversize or overweight transport requirements, and offers a routing service to help companies identify routes which are either the most cost efficient or required by states because of the truck's cargo.

The Transceiver ACCEL Legalization System™, introduced in June 1990, is a distributed system installed at the client's site for initiating, ordering, tracking, and processing specialized permits via Transceiver's data center in Carrollton.

- The system's terminal prompts the user and gives specific instructions for filling out the permit request right on the screen.
- Daily logs, and various management reports are also available. Future capabilities will include licensing, fuel tax, and log auditing functions.
- There are currently over 50 ACCEL Legalization Systems installed.

As a result of the acquisition of Fleetline in May 1989, Comdata also provides fuel tax reporting, driver log auditing, and audio and video tape training for trucking company drivers and management.

In July 1990, Comdata introduced TruckFax™, a network of truck stop public fax machines that accept Comdata Comchek Cards, MasterCard, and VISA credit cards.

- Through TruckFax, trucking companies can send or receive detailed information from drivers, such as bills of lading or proof of delivery documents. TruckFax may also be used by anyone with a Comchek, MasterCard, or VISA card to send a fax.

Consumer Services:

Comdata Consumer Services provides cash advance services to individuals for personal and emergency reasons. Comdata more than doubled the size of this division when it purchased Cashchek International and Fundsnet in June 1989.

- All transactions are processed against the individual's credit line on a bank or other participating credit card, such as MasterCard, VISA, or Discover.
- Most transactions originate from casinos, parimutuel betting tracks, and cruise ships. In 1989, Comdata processed 3.6 million credit card transactions of this type. During the year, Comdata installed new VeriFone terminals in all major casino accounts.

- Uses for this service have expanded to other needs for convenient credit card advances, such as for legal documents, court fines, hotel reservations, utility payments, and emergency cash.

Retail Services:

Comdata Retail Services provides check verification, check guarantee, and collection services for supermarket and grocery store chains, as well as certain mass merchandise retail stores in several regional markets. These services are currently marketed under the trademarks Cashex and Honest Face.

- During 1989, Comdata processed approximately 100 million checks, representing a face value of about \$6.5 million.
- Operations centers in Atlanta, St. Louis, and Los Angeles serve merchants with store operations in 22 states.

During the second quarter of 1990, Comdata introduced the Integrated Payment System (IPS), an automated in-lane payment system for supermarkets that accepts credit and debit cards as well as authorizes checks through a single device. IPS also provides a platform for future services, such as frequent shopper incentives, electronic couponing, and other special promotions.

Telecommunications Services:

NEWCOM, introduced in late 1989, is Comdata's long distance billing service.

- New tariffs which AT&T recently filed with the FCC allow Comdata to act as a value-added remarketer for AT&T in order to provide AT&T long distance services at more competitive prices.
- Comdata clients can take advantage of the same volume discounts on AT&T 800 inbound and AT&T WATS outbound long distance services that Comdata receives as an AT&T National Account.
- Each month, AT&T bills Comdata for total long distance usage charges. Comdata then invoices NEWCOM clients, passing on volume discounts. Bills include call detail for long distance calls and a management overview from Comdata summarizing monthly and year-to-date savings through the NEWCOM service.

- Services available through AT&T to complement the NEWCOM service include network optimization, specialized engineering, provisioning, and service support at all customer locations.
- Non AT&T customers, such as those on MCI or Sprint, may also enroll in the NEWCOM service.

Industry Markets

Comdata's 1989 revenue was derived as follows:

Transportation industry	63%
Credit cardholders	25%
Retail establishments	<u>12%</u>
	100%

Geographic Markets

Virtually 100% of Comdata's 1989 revenue was derived from the U.S. Less than 1% was derived from international sources.

Office locations for Comdata and its divisions are as follows:

- Transportation Services is headquartered in Brentwood (TN).
- The Transceiver Division, headquartered in Carrollton (TX), has regional offices in Cincinnati (OH), Jefferson City (MO), Marysville (CA), Quebec City (Quebec), and Albany (NY).
- Consumer Services is headquartered in Brentwood and has offices in Atlantic City, Las Vegas, and Reno.
- Retail Services is headquartered in Brentwood, and has regional offices in Brea (CA), Atlanta, and St. Louis.

Computer Hardware and Software

Comdata's data centers in Brentwood, Dallas, Los Angeles, and Atlanta have various IBM mainframes, midrange systems, and microcomputers installed in support of their various operations.

COMPANY PROFILE

COMDATA HOLDINGS CORPORATION

Post Office Box 15822
Nashville, TN 37215
(615) 385-0400

George L. McTavish, President and CEO of
Comdata Holdings Corporation
Mel A. Mahler, President and COO of
Comdata Network, Inc.
Public Corporation, OTC
Total Employees: 1,303
Total Revenue, Fiscal Year End
12/31/87: \$100,610,763

The Company

Comdata Holdings Corporation is the holding company of Comdata Network, Inc. Comdata Holdings had no operations until September 9, 1987, when it acquired Comdata Network and its subsidiaries.

- Comdata Network, founded in 1969, provides funds transfer services to the trucking industry and to bank credit card holders and offers check verification processing services for retail establishments.
- The total acquisition cost of Comdata Network was approximately \$320 million.
- The partnership of Welsh Carson Anderson and Stowe IV (WCAS IV) and certain other investors own approximately 90% of the outstanding common shares of Comdata Holdings. The remaining shares are publicly owned and traded.

The principal owners of Comdata Holdings, WCAS IV, have outlined the following as their primary business objectives:

- To maintain the current customer base, and to increase market share by improving service and leveraging the company's technological capabilities and diverse product lines.
- To develop new products and services for the current customer base using the existing computer network.
- To acquire companies that will contribute to Comdata's primary business in transportation, payment services, and cash advance services.

In November 1987, as part of the corporate restructuring, WCAS IV hired a new President, CEO, and other executive management personnel whose management philosophy and expertise fit with WCAS IV's plan for Comdata.

Unaudited, pro forma 1987 revenue was \$100.6 million. The revenue for the year ended December 31, 1986 was \$86.6 million, but is not directly comparable to 1987 revenue due to a change in capital structure on September 9, 1987. In the financial summary that follows, 1987 results are segmented into the eight months and nine days ending September 9, 1987 and the three months and 21 days ending December 31, 1987 due to a change in capital structure.

**COMDATA HOLDINGS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)**

ITEM	FISCAL YEAR					
	12/31/87 (a)	9/9/87 (a)	1986	1985	1984	1983
Revenue	\$32.2	\$68.4	\$86.6	\$91.7	\$80.9	\$63.4
• Percent increase (decrease) from previous year	(b)	(b)	(6%)	13%	28%	52%
Income (loss) before taxes	(\$9.1)	\$13.3	\$22.2	\$24.1	\$25.2	\$20.2
• Percent increase (decrease) from previous year	(b)	(b)	(8%)	(5%)	25%	33%
Net income (loss)	(\$6.1)	\$7.4	\$12.2	\$12.7	\$13.3	\$11.1
• Percent increase (decrease) from previous year	(c)	(c)	(4%)	(4%)	20%	32%
Earnings (loss) per share	(\$0.24)	\$0.39	\$0.64	\$0.62	\$0.65	\$0.55
• Percent increase (decrease) from previous year	(b)	(b)	3%	(5%)	18%	17%

- (a) The data for 1987 is split between the eight months and nine days ended September 9 and the three months and 21 days ended December 31, 1987, due to a change in capital structure.
- (b) 1987 results are not directly comparable to previous years due to a change in capital structure on September 9, 1987.
- (c) Net income for 1987 includes a \$9.7 million interest expense and a \$4.8 million restructuring and nonrecurring expense after the change in capital structure, and a \$3.8 million restructuring and nonrecurring expense prior to the change in capital structure.

Comdata management attributes growth in revenue in 1987 primarily to a greater number of funds transfer transactions for the trucking industry and the acquisition of the product lines of U.S. Funds Express, which was purchased in December 1986. These increases were offset by a decline in revenue in the check payment services segment resulting from the loss of two major customers in the St. Louis market.

- In 1987 Comdata processed 21.2 million funds transfer transactions, an 18% increase over 1986 transactions of 18 million. Trucking/Corporate transactions accounted for 19.4 million of the transactions, a 20% increase over the previous year.
- The average revenue per Trucking/Corporate funds transfer transaction in 1987 was \$2.62 compared to \$2.54 in 1986. The increase is a result of the addition of the U.S. Funds CMO product line where the fees are approximately \$7.70 per transaction.

Revenue for the three months ended March 31, 1988 reached \$24.9 million. the net loss of for this period was \$1.9 million. The loss was, however, expected largely because of interest expense and amortization associated with the September 1987 merger transaction.

Recent acquisitions made by Comdata include the following:

- In March 1988, Comdata Holdings acquired Honest Face Systems, Inc. for approximately \$2.1 million, mostly in Comdata Holdings stock. Honest Face is a provider of check payment services in the Atlanta (GA) area.
- On December 29, 1986, Comdata acquired the outstanding stock of U.S. Funds Express for \$10 million in cash. U.S. Funds provides funds transfer and document transmission services similar to those offered by Comdata.

As of December 31, 1987 Comdata had 1,303 employees, segmented as follows:

Marketing and sales	178
Customer support	836
Research and development	27
Computer operations	116
General and administrative	<u>146</u>
	1,303

Major competition for funds transfer services comes from FundsNet, FCS (a subsidiary of American Express), and Cummins Cash and Information Systems. Major credit card companies and vendors of travelers checks that make cash available to holders of their cards and checks on a nationwide basis are also competitors. Check guarantee competitors include Telecredit, McDonnell Douglas Information Systems Company, Comp-U-Check, and other regional companies.

Key Products and Services

Comdata operates two business segments: funds transfer and information transmission, and check payment services.

- Funds transfer services are offered to the trucking industry and credit card holders through over 8,000 truckstops, motels, resort hotels, casinos, race tracks, and cruise ships.
- Two Comdata subsidiaries, Cashex and Cashex West, provide check authorization and guarantee services for over 1,100 grocery and other retail stores located in California, Illinois, Missouri, and Nevada.
- A three year financial summary by business segment follows:

**COMDATA HOLDINGS, INC.
THREE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	1987		1986		1985	
	\$	PERCENT OF TOTAL	\$	PERCENT OF TOTAL	\$	PERCENT OF TOTAL
Revenue						
• Funds transfer and information transmission	\$85.5	85%	\$69.5	80%	\$73.2	80%
• Check payment services	<u>\$15.1</u>	<u>15%</u>	<u>\$17.1</u>	<u>20%</u>	<u>\$18.5</u>	<u>20%</u>
Total	\$100.6	100%	\$86.6	100%	\$91.7	100%
Income from operations						
• Funds transfer and information transmission	\$20.2	86%	\$16.4	77%	\$17.5	80%
• Check payment services	<u>3.3</u>	<u>14%</u>	<u>4.9</u>	<u>23%</u>	<u>4.5</u>	<u>20%</u>
Total	\$23.5	100%	\$21.3	100%	\$22.0	100%

A further breakdown of funds transfer and document transmission services source of revenue for 1987 and 1986 follows:

**COMDATA HOLDINGS, INC.
TWO-YEAR SOURCE OF REVENUE
(\$ millions)**

FISCAL YEAR	1987		1986	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Funds transfer				
• Trucking/Corporate	\$50.9	60%	\$41.0	60%
• Gaming	18.3	21%	19.7	28%
• Other	1.2	1%	0.3	0%
Subtotal	\$70.4	82%	\$61.0	88%
Permit services	\$10.5	12%	\$4.9	7%
COMVOY	\$4.6	5%	\$3.6	5%
Subtotal	\$15.1	17%	\$8.5	12%
TOTAL	\$85.5	100% (a)	\$69.5	100%

(a) Difference in total due to rounding.

Revenue generated by funds transfer and information transmission services increased by 23% in 1987 primarily due to the success of Comdata's Premier program which was introduced in January 1987, the addition of the funds transfer and permit operations of U.S. Funds, and increased revenues from COMVOY.

Comdata's principal customers are in the trucking industry. Services provided to the trucking industry, including funds transfer services, fuel purchase programs, COMVOY, and permit services, comprised approximately 60% of Comdata's revenue for 1987.

Funds Transfer and Information Transmission Services.

- Comcheck Service, Comdata's basic funds transfer service, is geared towards the trucking industry, but is open to public use as well. It is general policy that a customer must establish credit with Comdata prior to using these services. The customer may then request a "Comcheck", which is then prepared and authorized at a Service Center (truckstops, check cashing centers, etc.) and is treated as a draft against the customer's credit to be paid at a later date.

- Express Comcheck Service was designed to speed the money transfer transaction time and reduce Comdata's communications expense. The customer is routinely supplied with computer generated express codes. The express codes authorize individuals to certain cash amounts which can be verified and obtained at Comdata's Service Centers.
- Corporate Funds Transfer is a program through which employees of participating companies may obtain funds at Comdata Service Centers through the use of a Comcheck Card. The Comcheck Card may also be used to access MCI telephone service.
- The Fuel Purchase program permits trucking companies and other transportation customers to purchase fuel through an identification card system provided by Comdata. Comdata has equipped approximately 2,800 of its Service Centers with varying combinations of stripe readers, check printers, and modems in order to automate fuel purchase transactions.
- The Premier Card program, introduced in 1987, is virtually identical to the Fuel Purchase program except that fuel retailers agree to pay a fee to Comdata that is a percentage of the transaction amount, and thus reduces the transaction cost to the customer.
- COMVOY is Comdata service designed to reduce empty backhauls by making specific shipment information available to trucking company customers. Shipment information is obtained by polling freight brokers nationwide and is then entered into the COMVOY shipment interchange system, making the information promptly available to all COMVOY customers. COMVOY generated \$4.6 million in revenue in 1987, a 28% increase over \$3.6 million in 1986.
- Permit Services offered by Comdata assist trucking customers in determining the permits needed for a designated trip, and also in forwarding all the necessary permits electronically to drivers en route.
- Credit Card Transactions enable holders of MasterCard and VISA credit cards to obtain cash advances at Comdata Service Centers in casinos and racetracks. In 1987 there were 1.8 million credit card transactions for a total of \$18.3 million in revenue, a 7% decrease from 1986's revenue of \$19.7 million derived from 1.9 million transactions. Revenue declines were attributed to increased competition, especially at casinos where the majority of Comdata's credit card transactions occur.

Check Authorization and Guarantee Services.

- By use of a Cashex card, furnished to over 7.4 million individual customers or certain other cards issued by financial institutions, customers are able to process their transactions via a network of approximately 1,400 on-line computer terminals located within participating retail stores. Check authorization revenue in 1987 was \$15.1 million, a 12% decrease from 1986 revenue of \$17.1 million.
- Honest Face is expected to add approximately \$4.5 million to this segment's revenue in 1988.

Industry Markets

Comdata's 1987 revenue was derived as follows:

Transportation industry	67%
Credit card holders	15%
Retail establishments	<u>18%</u>
	100%

Geographic Markets

Virtually all of Comdata's 1987 revenue was derived from the U.S. Less than 1% of revenue was derived from funds transfer services provided to casinos in the Bahamas.

Office locations for Comdata Holdings and its subsidiaries are as follows:

- | | |
|--------------------------------|---------------|
| • Comdata Holdings Corporation | Nashville, TN |
| • Comdata Network, Inc. | Nashville, TN |
| • U.S. Insta-Permit | Dallas, TX |
| • Cashex, Inc. | St. Louis, MO |
| • Cashex West, Inc. | Brea, CA |
| • Honest Face Systems, Inc. | Atlanta, GA |

Computer Hardware and Software

Comdata operates the following hardware:

- 2 NAS 8263's.

- 1 IBM 4341.
- 1 IBM System 88.
- 8 Varian processors.
- 1 STAR Stravius XA 2000 model 100.
- 1 Stravius XA 440.
- 2 Stravius XA 600's.
- 1 Burroughs B2900.
- 1 Burroughs V-340.
- 11 Series/1 front end processors for communications.
- 600 PC's.
- 400 CRT's.
- 1,500 remote terminals.
- Various audio response terminals.

FINANCIAL UPDATE TO PROFILE DATED JUNE 1985

COMDATA NETWORK, INC.
2209 Crestmoor Road
P.O. Box 15822
Nashville, TN 37215
(615) 385-0400

Robert McCullough, Chairman
R. Lewis Jones, President and CEO
Public Corporation, OTC
Total Employees: 1,259
Total Revenue, Fiscal Year End
12/31/85: \$91,728,608

COMDATA NETWORK, INC. FIVE-YEAR FINANCIAL SUMMARY (a) (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1985	1984	1983	1982	1981
Revenue	\$ 91,729	\$ 80,860	\$ 63,369	\$ 41,784	\$ 32,700
• Percent increase from previous year	13%	28%	52%	28%	37%
Income before taxes	\$ 24,087	\$ 25,234	\$ 20,198	\$ 15,184	\$ 11,598
• Percent increase (decrease) from previous year	(5%)	25%	33%	31%	43%
Net income	\$ 12,727	\$ 13,268	\$ 11,083	\$ 8,405	\$ 6,436
• Percent increase (decrease) from previous year	(4%)	20%	32%	31%	50%
Earnings per share (b)	\$ 0.62	\$ 0.65	\$ 0.55	\$ 0.47	\$ 0.38
• Percent increase (decrease) from previous year	(5%)	18%	17%	24%	46%

- (a) The financials have been restated to reflect the merger of Instacom, Inc. effective October 28, 1983.
(b) Restated to reflect a two-for-one stock split effective June 7, 1983.

- As a percentage of revenue, income from operations was 24%, 30%, and 28% for 1985, 1984, and 1983, respectively. Comdata management states that the primary cause of the reduction in operating margins from 1984 to 1985 was the increase in additions to the allowance for doubtful accounts of \$10.5 million in 1985 compared with \$3.1 million in 1984. The increase reflected management's conservative position regarding accounts receivable from the trucking industry (which is continuing to be affected by deregulation) and the introduction of check guaranty services in California during 1985.

- In December 1985 Comdata purchased one million shares of its common stock from C. W. Harter, Jr. (then chairman) for \$12 million. The purchased shares were immediately retired.
- Revenue for the six months ending June 30, 1986 was \$43.8 million, a 5% decrease from \$46.2 million for the same period in 1985. Net income was approximately \$5.9 million, compared to \$6.5 million for the same period a year ago.
 - Comdata management states that the company's declining revenue and income from operations were due to pricing pressure on funds transfer products for the trucking and casino markets, and on its check guaranty services. Additionally, the company's efforts of the past year to reduce bad debt through more stringent credit procedures have had a negative impact on revenue by reducing the company's customer base.
 - The second quarter results for 1986 include charges relating to a contested proxy solicitation, totaling approximately \$1.4 million before taxes, or \$756,000 on an after-tax basis.

SOURCE OF REVENUE

- One hundred percent of Comdata's 1985 revenue was derived from processing services. Comdata provides money-transfer services to the trucking industry and credit card holders through more than 7,500 truckstops, motels, resort hotels, casinos, race tracks, and cruise lines. Check authorization and guaranty services are provided to retail establishments. A three-year summary of source of revenue follows (\$ millions):

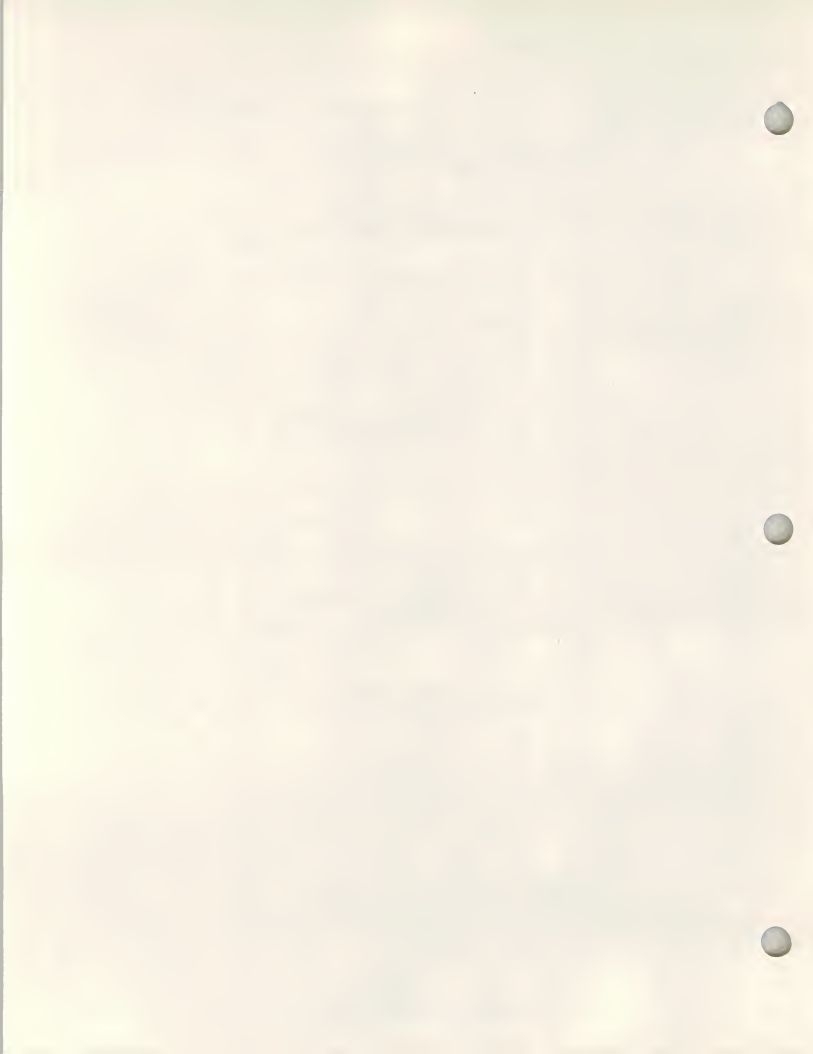
FISCAL YEAR ITEM	1985		1984		1983	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Funds transfer	\$66.5	73%	\$59.2	73%	\$49.7	78%
Permit transfer	3.9	4	4.6	6	4.6	7
Check verification, authorization, and guaranty	18.5	20	14.8	18	8.1	13
Freight shipment interchange services and other	2.8	3	2.2	3	1.0	2
Total	\$91.7	100%	\$80.8	100%	\$63.4	100%

COMDATA NETWORK, INC.

- Comdata's 1985 revenue was derived approximately as follows:

Trucking industry	56%
Credit card holders	24
Retail establishment	<u>20</u>
	100%

- Virtually all of Comdata's revenue is derived from the U.S.



COMPANY PROFILE

COMDATA NETWORK, INC.

2209 Crestmoor Road
P.O. Box 15822
Nashville, TN 37215
(615) 385-0400

Public

C. W. Harter, Jr., Chairman and CEO
Jerry L. Yoder, President and COO
Total Employees: 1,150
Total Revenue, Fiscal Year End
12/31/84: \$80,859,612

THE COMPANY

- Comdata Network, Inc., founded in 1969, provides funds transfer services to the trucking industry and to bank credit card holders and offers check verification processing services for retail establishments.
- On October 28, 1983, Comdata completed its acquisition of Instacom, Inc. of Dallas (TX), a corporation providing funds transfer and document transmission services for the trucking industry and check verification and guaranty services for retail establishments.
 - The acquisition was accounted for as a pooling of interests. Stockholders of Instacom received .701 of one share of Comdata stock for each share of Instacom common stock. As a result of this transaction, 3,859,180 shares valued at \$110 million were issued.
 - Instacom's 1982 revenue was \$15.3 million. Revenue for the nine months ending September 30, 1983, prior to their acquisition, was \$16.8 million. Instacom had approximately 300 employees at the time of acquisition.
 - In June 1983 Instacom purchased the assets and liabilities of The Comet Corporation, renamed Instacom Cashex, Inc., for \$6 million in cash and 427,500 shares of Instacom common stock valued at \$4.7 million. Operations of Cashex have been included in the consolidate statement of income since June 1, 1983 and contributed \$7.2 million from its seven months operation in 1983 and \$13.5 million in 1984.
 - Cashex provides check authorization and guaranty services principally in the St. Louis metropolitan area and California.
- 1984 revenue reached \$80.9 million, a 28% increase over 1983 revenue of \$63.4 million. Net income rose 20% from \$11.1 million in 1983 to \$13.3 million in 1984. A five-year financial summary follows:

COMDATA NETWORK, INC.

COMDATA NETWORK, INC.
FIVE-YEAR FINANCIAL SUMMARY (a)
(\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	\$ 80,860	\$ 63,369	\$ 41,784	\$ 32,700	\$ 23,817
• Percent increase from previous year	28%	52%	28%	37%	30%
Income before taxes	\$ 25,234	\$ 20,198	\$ 15,184	\$ 11,598	\$ 8,113
• Percent increase from previous year	25%	33%	31%	43%	47%
Net income	\$ 13,268	\$ 11,083	\$ 8,405	\$ 6,436	\$ 4,288
• Percent increase from previous year	20%	32%	31%	50%	33%
Earnings per share (b)	\$ 0.65	\$ 0.55	\$ 0.47	\$ 0.38	\$ 0.26
• Percent increase from previous year	18%	17%	24%	46%	24%

- (a) The financials have been restated to reflect the merger of Instacom, Inc. effective October 28, 1983.
 (b) Restated to reflect a two-for-one stock split effective June 7, 1983.

- Comdata management attributes growth in revenue and net income over the past three years primarily to the increased number of both trucking and credit card processing transactions.
 - In 1984 Comdata processed 15.2 million funds transfer transactions, a 36% increase over 1983 transactions of 11.2 million. Credit card transactions accounted for 1.5 million of the transfers, a 79% increase over the previous year.
 - Revenue per funds transfer transaction declined 12% from \$4.42 in 1983 to \$3.88 in 1984. The decline was due primarily to competitive pricing pressures.
- Revenue for the three months ending March 31, 1985 reached \$22.4 million, a 15% increase over revenue of \$19.4 million for the same period in 1984. Net income rose 11% to \$3.4 million for this period from \$3.1 million in the first quarter of 1984.
- Major competition for funds transfer services to the trucking industry comes from Western Union and FundsNet, Inc. Competition for credit card holder funds transfer services comes from FundsNet and companies such as American Express that issue credit cards or travelers checks. Check guarantee compet-

COMDATA NETWORK, INC.

itors include Telecredit, McDonnell Douglas Payment Systems Company (formerly Tymshare's Telecheck), and Comp-U-Check.

KEY PRODUCTS AND SERVICES

- One hundred percent of Comdata's 1984 revenue was derived from processing services. Comdata provides money-transfer services to the trucking industry and credit card holders through approximately 7,000 truckstops, motels, resort hotels, and casinos. Check authorization and guaranty services are provided to retail establishments. A three-year summary of source of revenue follows (\$ millions):

FISCAL YEAR ITEM	1984		1983		1982	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Funds transfer	\$59.2	73%	\$49.7	78%	\$37.6	90%
Permit transfer	4.6	6	4.6	7	3.9	9
Check verification, authorization, and guaranty	14.8	18	8.1	13	0.3	1
Freight shipment interchange services and other	<u>2.2</u>	<u>3</u>	<u>1.0</u>	<u>2</u>	<u>-</u>	<u>-</u>
Total	\$80.8	100%	\$63.4	100%	\$41.8	100%

- Sixty percent of Comdata's 1984 revenue was derived from processing services for the transportation industry through its Comchek® or Express Comchek funds transfer services and its fuel purchase program, permit transfer program, and shipment interchange program.
 - The original Comchek® Service was introduced in 1972.
 - The request for transfer of funds to a truck driver is made through a Comchek Service Center to Comdata. Comdata verifies the trucking company's credit and notifies the Service Center as to the amount and recipient of the requested draft.
 - Once the driver provides the prescribed identification, the Service Center calls Comdata to obtain an authorization number for the requested draft. The driver then endorses the draft in exchange for cash.

COMDATA NETWORK, INC.

- Trucking company customers are charged an agreed fee per transaction that ranges in most cases from \$3.25 to \$6.50. The Service Center deposits the draft in its bank account. The trucking company remits the amount of the Comchek draft plus the service fee by wire transfer or check to Comdata.
- Express Comchek, introduced in 1977, increases the speed and reduces the communication expense of money transfers.
 - The truck driver is furnished with a supply of blank Comchek drafts. Upon request, he is given an express code by his dispatcher that contains the trucking company's identity and the dollar amount the driver is authorized to obtain.
 - These codes are generated by computer and continuously supplied by Comdata to certain of its trucking company customers. The driver enters other specified information on the Comchek draft and presents it to a Service Center, which then calls Comdata for a transaction authorization number. Upon completion of this procedure, the driver may obtain cash in exchange for the draft.
- In mid-1981 Comdata introduced a fuel purchase program that permits trucking companies and other transportation customers to obtain cash discounts on fuel purchases through an identification card system provided by Comdata.
 - The driver presents his card to the gas station cashier who then calls Comdata to relate the identification number and relevant fuel purchase information.
 - The operator gives the cashier an authorization number for a Comchek draft to be made payable to the Service Center and driver for the amount of fuel purchased.
 - Trucking company clients are notified the following day of all transactions. Remittances are forwarded to Comdata via check or wire transfer.
 - Comdata maintains an on-line data base of current fuel prices for all Service Centers that is updated each time a customer makes a fuel purchase.
 - In 1984 Comdata processed 5.9 million fuel purchase transactions producing \$13.9 million in revenue, a 42% increase over 1983 revenue of \$9.8 million on 3.5 million transactions.
- Comdata offers a permit service to clients requiring special regulatory permits to transport goods within certain states.

COMDATA NETWORK, INC.

- Comdata determines which permits are required and electronically transmits them to agent or customer terminal locations where they can be printed out and obtained by the truck driver.
- The transmission equipment is owned by Comdata and is typically placed in state permit-issuing authorities' offices and in truck stops close to state borders.
- Comdata currently provides these services to over 2,000 clients. The permit service is regarded as a convenience to existing funds transfer customers and as a service to attract new customers. In 1984 Comdata derived \$4.6 million in revenue from this service.
- In April 1983 Comdata introduced its COMVOY shipment interchange program which allows shippers and carriers to electronically match shipments with available cargo space on trucks going to the required destination. This service generated \$2.2 million in revenue for 1984.
- Twenty-two percent of 1984 revenue (\$17.5 million) was derived from funds transfer services provided to individual credit card holders through Comdata Service Centers located at truckstops, gambling casinos, motels, hotels, and college campuses.
- The amount of cash received by the card holder is charged, along with Comdata's service fee, to the individual's MasterCard® or VISA® account. The minimum service fee charged by Comdata for this type of transaction is \$5.75 and increases to \$60.50 for a transfer of \$1,500. Authorization of the amount requested is confirmed by means of computer terminals at the Comdata Data center which access National Data Corporation's MasterCard and VISA authorization file data base. After authorization, the requested amount is made available by the service center using a Comchek.
- Comdata's funds transfer service is available in over 138 casinos and over 50 racetracks in Las Vegas, Reno, Tahoe, Atlantic City, and Nassau. Over 1.5 million transactions were completed in 1984, an increase of 74% over 1983.
- Approximately 300 hotels use Comdata's reservation guarantee service, through which individuals prepay for their accommodations to guarantee a reservation.
- In April 1983 Comdata announced the availability of a credit card magnetic stripe reader that sends information on-line to the host computer.
- The readers reduce communications time from an average of 90 seconds to approximately 8 seconds, significantly reducing costs.

COMDATA NETWORK, INC.

- Magnetic stripe readers have been installed in approximately 1,200 service centers since their introduction.
- Eighteen percent of Comdata's 1984 revenue (\$14.8 million) was derived from check authorization and guaranty services provided by the company's subsidiaries Instacom Cashex, Inc. (Cashex) and Instacom Check Systems, Inc.
 - Cashex, acquired in 1983 with the Instacom merger, now represents a network of approximately 1,700 on-line computer terminals located in over 770 supermarkets and other retail establishments in the St. Louis (MO) metropolitan area and California.
 - The Cashex check authorization service allows the retailer on-line access to data files concerning the check writer. The check is reviewed against the Cashex bad check information and then authorized.
 - The Cashex check guaranty service involves issuing customers a Cashex card which is inserted along with the check and a personal ID number into a terminal which transmits the data to an on-line computer. The computer contains data utilized to authorize the check for cashing by causing an authorization code to be printed on the back of the check. The check is guaranteed without recourse to the retailer.
 - Comdata's check verification program, initiated in July 1982, is marketed by Instacom Check Systems, Inc. to retail establishments such as convenience stores, supermarkets, drug stores, and department stores in Texas and is based upon a data file containing information on individuals with a history of passing bad checks.

INDUSTRY MARKETS

- Comdata's 1984 revenue was derived as follows:

Trucking industry	60%
Credit card holders	22
Retail establishments	<u>18</u>
	100%

GEOGRAPHIC MARKETS

- Virtually all of Comdata's 1984 revenue was derived from the U.S. Less than 1% of revenue was derived from funds transfer services provided to casinos in the Bahamas.

COMDATA NETWORK, INC.

COMPUTER HARDWARE AND SOFTWARE

- Two IBM 4341s are installed at Comdata's headquarters in Nashville. Six Tandem NonStop 11s are installed in Dallas.
- Comdata Service Centers access the Nashville data center via 78 inward and 30 outward WATS lines. The Dallas center is accessed via 66 inbound and 21 outbound WATS lines.
- Check verification clients access the mainframe via local dial-up.



FINANCIAL UPDATE TO HIGHLIGHT DATED JUNE 1983

COMDATA NETWORK, INC.
2209 Crestmoor Road
P.O. Box 15822
Nashville, TN 37215
(615) 385-0400

C. W. Harter, Jr., President and CEO
Public Corporation, OTC
Total Employees: 1,078
Total Revenue, Fiscal Year End
12/31/83: \$63,369,079

COMDATA NETWORK, INC. FIVE-YEAR FINANCIAL SUMMARY (a) (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1983	1982	1981	1980	1979
Revenue	\$ 63,369	\$ 41,784	\$ 32,700	\$ 23,817	\$ 18,352
. Percent increase from previous year	52%	28%	37%	30%	N/A
Income before taxes	\$ 20,198	\$ 15,184	\$ 11,598	\$ 8,113	\$ 5,511
. Percent increase from previous year	33%	31%	43%	47%	N/A
Net income	\$ 11,083	\$ 8,405	\$ 6,436	\$ 4,288	\$ 3,219
. Percent increase from previous year	32%	31%	50%	33%	N/A
Earnings per share (b)	\$ 0.55	\$ 0.47	\$ 0.38	\$ 0.26	\$ 0.21
. Percent increase from previous year	17%	24%	46%	24%	N/A

- (a) The above financials have been restated to reflect the acquisition of Instacom, Inc., effective October 28, 1983. The acquisition was accounted for as a pooling of interests. Stockholders of Instacom received .701 of one share of Comdata Network stock for each share of Instacom common stock. As a result of this transaction, 3,859,180 shares valued at \$110 million were issued.
- (b) Restated to reflect a two-for-one stock split effective June 7, 1983.

COMDATA NETWORK, INC.

SOURCE OF REVENUE

- One hundred percent of Comdata Network's 1983 revenue was derived from processing services. A three-year summary of source of revenue by service follows (\$ millions):

FISCAL YEAR ITEM	1983		1982		1981	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Funds transfer	\$49.7	78%	\$37.6	90%	\$29.1	89%
Permit transfer	4.6	7	3.9	9	3.6	11
Check verification, authorization, and guaranty	8.1	13	0.3	1	-	-
Freight shipment interchange services and other	1.0	2	-	-	-	-
Total	\$63.4	100%	\$41.8	100%	\$32.7	100%

COMPANY HIGHLIGHT

COMDATA NETWORK, INC.
2209 Crestmoor Road
P.O. Box 15822
Nashville, TN 37215
(615) 385-0400

C. W. Harter, Jr., Chairman and
President
Public Corporation, OTC
Total Employees: 507
Total Revenue, Fiscal Year End
12/31/82: \$26,483,436

THE COMPANY

- Comdata Network, Inc. was founded in 1969 to provide computerized remote-access communications services for the furniture moving industry. In 1972 the company changed its business emphasis to providing funds transfer processing services to the trucking industry. In 1977 funds transfer services were expanded to bank credit card holders.
- 1982 revenue reached \$26.5 million, a 34% increase over 1981 revenue of \$19.7 million. Net income rose 41% from \$4.1 million in 1981 to \$5.7 million in 1982. A five-year financial summary follows:

COMDATA NETWORK, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 26,483	\$ 19,733	\$ 14,369	\$ 11,206	\$ 7,076
. Percent increase from previous year	34%	37%	28%	58%	31%
Income before taxes	\$ 10,796	\$ 7,565	\$ 5,402	\$ 3,617	\$ 1,963
. Percent increase from previous year	43%	40%	49%	84%	28%
Net income	\$ 5,718	\$ 4,053	\$ 2,782	\$ 1,905	\$ 1,048
. Percent increase from previous year	41%	46%	46%	82%	22%
Earnings per share (a)	\$ 0.78	\$ 0.57	\$ 0.40	\$ 0.29	\$ 0.16
. Percent increase from previous year	37%	43%	38%	81%	N/A

(a) Adjusted to reflect a three-for-two stock split effective September 28, 1982.

- Comdata management attributes growth in revenue and net income during the past three years primarily to the increased number of both trucking and credit card processing transactions. In 1982 the company processed approximately 5.3 million transactions as compared to 3.8 million in 1981 and 2.95 million in 1980.
- On November 2, 1982, the company issued 1.1 million shares of common stock, generating proceeds of \$25.1 million, which are currently invested in short-term interest-bearing securities. Plans for use of the proceeds include expansion of the fuel purchase program.
- Revenue for the three months ending March 31, 1983, reached \$8.4 million, a 45% increase over revenue of \$5.8 million for the same period in 1982. Net income rose 42% during this period from \$1.2 million to \$1.7 million.
- As of December 31, 1982, the company had 507 employees. Comdata now has approximately 600 employees.
- Major competitors for funds transfer services to the trucking industry include Western Union and Instacom, Inc. Primary competition for credit card holder funds transfer services comes from FundsNet, Inc.

KEY PRODUCTS AND SERVICES

- One hundred percent of Comdata's 1982 revenue was derived from processing services. Comdata provides funds transfer services through approximately 4,800 truckstops, motels, resort hotels, and casinos that operate as Service Centers.
- Seventy-five percent of Comdata's 1982 revenue was derived from funds transfer services to the trucking industry. Comdata currently serves over 4,200 trucking companies as compared with 3,643 in 1981 and 2,880 in 1980.
- The original Comcheck® Service was introduced in 1972.
 - The request for transfer of funds to a truck driver is made through a Comcheck Service Center to Comdata. Comdata verifies the trucking company's credit and notifies the Service Center as to the amount and recipient of the requested draft.
 - Once the driver provides the prescribed identification, the Service Center calls Comdata to obtain an authorization number for the requested draft. The driver then endorses the draft in exchange for cash.
 - Trucking company customers are charged an agreed fee per transaction that ranges in most cases from \$3.25 to \$6.50. The Service Center deposits the draft in its bank account. The trucking company remits the amount of the Comcheck draft plus the service fee by wire transfer or check to Comdata.

- Express Comchek, introduced in 1977, increases the speed and reduces communication expense of money transfers.
 - The truck driver is furnished with a supply of blank Comchek drafts. Upon request, he is given an express code by his dispatcher that contains the trucking company's identity and the dollar amount the driver is authorized to obtain.
 - These codes are generated by computer and continuously supplied by Comdata to certain of its trucking company customers. The driver enters other specified information on the Comchek draft and presents it to a Service Center, which then calls Comdata for a transaction authorization number. Upon completion of this procedure, the driver may obtain cash in exchange for the draft.
- In mid-1981 Comdata introduced a fuel purchase program that permits trucking companies and other transportation customers to obtain cash discounts on fuel purchases through an identification card system provided by Comdata.
 - The driver presents his card to the gas station cashier who then calls Comdata to relate the identification number and relevant fuel purchase information.
 - The operator gives the cashier an authorization number for a Comchek draft to be made payable to the Service Center and driver for the amount of fuel purchased.
 - Trucking company clients are notified the following day of all transactions. Remittances are forwarded to Comdata via check or wire transfer.
 - Comdata maintains an on-line data base of current fuel prices for all Service Centers that is updated each time a customer makes a fuel purchase. The company is in the process of installing CRT terminals and printers in the offices of certain customers to allow dispatchers access to the data base.
 - In 1982 Comdata processed over 1 million fuel purchase transactions.
- Twenty-five percent of 1982 revenue was derived from funds transfer services provided to individual credit card holders through Comdata Service Centers located at truckstops, gambling casinos, motels, hotels, or college campuses.
- The amount of cash received by the card holder is charged, along with Comdata's service fee, to the individual's MasterCard or VISA account. The minimum service fee charged by Comdata for this type of transaction is \$5.75 and increases to \$60.50 for a transfer of

COMDATA NETWORK, INC.

\$1,500. Authorization of the amount requested is confirmed by means of computer terminals at the Comdata Data Center which access National Data Corporation's MasterCard and VISA authorization file data base.

- Comdata's funds transfer service is available in over 133 casinos in Las Vegas, Reno, Tahoe, Atlantic City, and Nassau.
- Approximately 300 hotels use Comdata's reservation guarantee service, through which individuals prepay for their accommodation to guarantee a reservation.
- In April 1983 Comdata announced the availability of a credit card magnetic stripe reader that sends information on-line to the host computer.
 - The readers reduce communications time from an average of 90 seconds to approximately 8 seconds, significantly reducing costs.
 - Magnetic stripe readers have been installed in 40 casinos in Las Vegas. Plans include expanding the service to Comdata's other money transfer Service Centers.

INDUSTRY MARKETS

- Comdata's 1982 revenue was derived as follows:

Trucking industry	75%
Credit card holders	<u>25</u>
	100%

GEOGRAPHIC MARKETS

- Virtually all of Comdata's 1982 revenue was derived from the U.S. Less than 1% of revenue was derived from funds transfer services provided to casinos in the Bahamas.

COMPUTER HARDWARE AND SOFTWARE

- Two IBM 4341s are installed at Comdata's headquarters in Nashville.
- Comdata Service Centers access the Nashville data center via 78 inward and 30 outward WATS lines.

COMPANY HIGHLIGHT

COMDATA NETWORK, INC.
2209 Crestmoor Road
P.O. Box 15822
Nashville, TN 37215
(615) 385-0400

C.W. Harter, Jr., President
and Chairman
Public Corporation, OTC
Total Employees: 425
Total Revenue, Fiscal Year End
12/31/80: \$14,369,381

PRINCIPAL BUSINESS Comdata Network, Inc. was founded in 1969 to provide computerized remote-access communications services for the furniture moving industry. In 1972, the company changed its business emphasis to providing money transfer services to the trucking industry. In 1977, its money transfer services were expanded to bank credit card holders.

FINANCIALS

FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

FISCAL YEAR ITEM	1980	1979	1978	1977	1976
Revenues	\$14,369	\$11,206	\$ 7,076	\$ 5,406	\$ 4,085
. Percent increase from previous year	28%	58%	31%	32%	67%
Income before taxes and extraordinary item	\$ 5,402	\$ 3,617	\$ 1,963	\$ 1,529	\$ 1,374
. Percent increase from previous year	49%	84%	28%	11%	78%
Net income	\$ 2,782	\$ 1,905	\$ 1,048	\$ 861	\$ 699
. Percent increase from previous year	46%	82%	22%	23%	35%
Earnings per share	\$ 0.60	\$ 0.44	\$ 0.24	\$ 0.20	\$ 0.16
. Percent increase from previous year	36%	83%	20%	25%	35%

SOURCE OF REVENUE

100% Processing services (funds transfer).

KEY PRODUCTS AND SERVICES

- Comdata provides funds transfer services through approximately 4,200 Comchek Service Centers, typically truckstops, motels, resort hotels, and casinos serving as independent agents.
- Money is transferred via Comdata's computerized telecommunications system which includes 78 inward and 30 outward WATS lines located at the corporate data center in Nashville.
- Funds transfer services are provided to the trucking industry and credit cardholders.
- Comdata currently serves over 2,880 trucking companies as compared with about 2,460 in 1979 and 2,150 in 1978.
- The original Comchek® Service was introduced in 1972 and is used by 30% of Comdata's trucking clients. The request for transfer of funds to a truck driver is made through a Comchek Service Center to Comdata. Comdata verifies the trucking company's credit and notifies the Service Center as to the amount and recipient of the requested draft. Once the driver provides the prescribed identification, the Service Center calls Comdata to obtain an authorization number for the requested draft. The driver then endorses the draft in exchange for cash. Trucking company customers are charged an agreed fee per transaction which ranges in most cases from \$3.25 to \$6.50. The Service Center deposits the draft in its bank account. The trucking company remits the amount of the Comchek draft, plus the service fee, by wire transfer or check to Comdata.
- Express Comchek, introduced in 1977, increases the speed and reduces communication expense of money transfers. It is used by 70% of Comdata's trucking clients. The truck driver is furnished with a supply of blank Comchek drafts. Upon request he is given an express code by his dispatcher which contains the trucking company's identity and the amount the driver is authorized to obtain. These codes are computer generated and supplied by Comdata to certain of its trucking company customers on a continuing basis. The driver enters other specified information on the Comchek draft and presents it to a Service Center which then calls Comdata for a transaction authorization number. Upon completion of this procedure, the driver may obtain cash in exchange for the draft.

COMDATA NETWORK, INC.

- Funds transfer services are provided to individual credit cardholders through any Comdata Service Centers located at truckstops, gambling casinos, motels, hotels, or college campuses.
 - The amount of cash received by the cardholder is charged, along with Comdata's service fee, to the individual's MasterCard or VISA account. The minimum service fee charged by Comdata for this type of transaction is \$9.25 and increases to \$40.50 for a transfer of \$1,000. Authorization of the amount requested is confirmed by means of computer terminals at the Comdata Data Center which access National Data Corporation's MasterCard and VISA authorization file data base.
 - Comdata's service is available in over 120 casinos in Las Vegas, Reno, Tahoe, Atlantic City, and Nassau.
 - About 300 hotels use Comdata's reservation guarantee service where individuals pre-pay for their accommodation to guarantee a reservation.
- Three colleges currently offer Comdata money transfer services.
- Comdata introduced a fuel purchase discount program in August 1981 for interstate trucking companies. Trucking companies which sign up for this program will receive a discount of approximately \$.05 per gallon for paying cash via a Comcheck and a further discount at authorized participating truck stops of about \$.07 per gallon.
 - Comdata has signed up 460 truck stops out of a total prospect list of about 800.
 - Comdata will receive a \$3.50 per transaction processing fee for the service.
 - Comdata is targeting to sign up 100 trucking companies by year-end 1981.

INDUSTRY MARKETS

Trucking Industry	75%
Credit Cardholders	25%

GEOGRAPHIC MARKETS

United States	99%
International	<u>1</u>
	100%

COMPUTER HARDWARE

2 IBM 4341s located in Nashville, TN.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

January 1998

Comdisco Inc. - Business Continuity Services

Contact Information for Business Continuity Services in the U.K.:

Nigel Ghent
1 Centaurs Business Park
Grant Way
Iselworth
Middlesex
TW7 5QD

Tel: 0181 400 8000
Fax: 0181 400 8183
Email: nghent@comdisco.com
Internet: <http://www.comdisco.com>

*The following profile outlines the services
and support offered by Comdisco for
Business Continuity Services.*

Company Background

Comdisco, Inc. was founded in the UK in 1983. The company first started out in the USA in 1969. It is owned by Comdisco Inc. ("CDO" on NYSE).

Comdisco has locations throughout the UK, Europe, North America and the Far East (Pacific rim).

Main Activities

Comdisco's main activities are business continuity services. The company entered the business continuity services market in 1983 in the U.K.

Employees

Exhibit 1

Comdisco Inc.'s Employees

	Total	Desktop-Staff
World-wide	2,100	1,000
Europe	450	200
U.K.	75+	40

*Source: Comdisco***Financial Information**

Exhibit 2

**Comdisco's Revenues, 1996
(Financial year ended Sept. 30, 1996)**

	Revenues (\$million)
World-wide revenues	\$2,431
of which business continuity services revenues	\$318
European revenues	\$465
of which business continuity services revenues	\$41

*Source: Comdisco***Vertical Markets**

Most of Comdisco's customers operate in the following vertical sectors:

- Finance/Banking/Insurance
- Retail
- Distribution
- IT
- Telecommunications.

Exhibit 3

**Comdisco's Business Continuity Services
Activities by Industry**

Vertical Market	% of Revenues	% of Projects
Finance	50%	50%
Retail	15%	15%
Utilities	5%	5%
Communications	8%	8%
Transport	2%	2%
Business Services	8%	8%
Discrete Manufacturing	4%	4%

Source: Comdisco

Exhibit 4

Comdisco's Business Continuity Services Skills

Service Type	% of Proportion of Business	Competencies
Hot Standby	<5%	High
Warm Standby	50%	High
Cold Standby	20%	High
On-Site Back-Up Services/Mobile Units	10%	High
Remote Management	0%	Low
Contingency Planning & Risk Analysis	15%	High
Virus Protection/Data Security	0%	Low
Millennium Testing	<5%	High

*Source: Comdisco***Reference Customers**

Some of Comdisco's major reference customers for business continuity services are:

- Direct Line
- Proctor & Gamble
- Royal & Sun Alliance
- Save & Prosper
- United Biscuits.

Strategic Positioning*Special Strengths*

Comdisco considers the following points to be its main differentiators/strengths in the business continuity services market:

- Experience — 30,000+ tests : 270+ invocations
- Independence — Unix, NT and proprietary platform recovery services from enterprise servers to the desktop
- Resources — 50+ recovery centers, 7,000+ work area positions
- Financial Stability — \$2.4 billion corporation.

Competition

Comdisco considers its main competitors to be:

Locally:

- IBM BRS
- Guardian
- SG-RS
- Safetynet
- Granada.

Internationally:

- IBM BRS
- Sungard.

Objectives

Comdisco is continually looking at new markets, regions, products & services, alliance partners etc. Recent acquisitions have included dealing room recovery services and additions to its range of recovery planning software tools.

Case Study

Customer: Direct Line

As advertising campaigns go, one of the most successful in promoting instant name recognition has got to be Direct Line Insurance's motorized red telephone. By recognizing that insurance consumers want simplicity, convenience and value for their money, Direct Line, in the space of a decade, revolutionized the insurance industry and, in the process, it has become one of the UK's largest insurers. Direct Line is heavily reliant on its IT and networks, and uses Comdisco as its mainframe recovery provider.

In 1984, businessman Peter Wood decided that the newly emerging telecommunications and computer technologies offered the opportunity to sell insurance policies direct to the public. Telephones were seen as a way to cut out the brokers and their commissions, and computers would enable quick and efficient transactions. This new approach worked, and by extending the formula to other financial services, the company soon branched out from its original motor insurance market into home insurance, loans and mortgages.

Although computer technology has contributed greatly to Direct Line's success, its potential failure is the company's greatest threat. Every transaction, every policy and every customer record is processed and stored on a computer system. And if, for any reason, the main frame failed, the company might be rendered temporarily unable to trade.

Comdisco and Direct Line currently test the mainframe recovery plan in Comdisco's Isleworth mainframe recovery center at least four times a year. But, during May 1996 they decided to do something a little bit different. The company explored the possibility of remotely recovering the main frame from outside the UK. Comdisco's North American mainframe recovery center in New Jersey was chosen.

The New Jersey site is a regional facility, and to connect to the U.K. it was linked to Comdisco's international center in Chicago. This, in turn, was bridged to the U.K. via the Orion satellite service. Customer and policy details are backed up onto 3490E tapes and these were transported to the US by a secure courier.

Bhaktesh Patel is Direct Line's IT Service Management Manager, and he found that the remote test to the US was an extremely valuable learning experience. "We back-up 800 gigabytes of production data every day, and it was imperative that we could remotely recover and access large volumes of information over large distances," he said.

In total, only eight Direct Line staff were needed for the test, two in the States and the remainder in the U.K. From a cold start the whole main frame, covering 10 offices in six UK

cities, was recovered in less than 19 hours, well within Direct Line's recovery deadline. Bhaktesh Patel again: "Because our IT systems control every aspect of our business, we have to recover to Isleworth by the 24 hour mark. That we were able to recover to New Jersey with five hours to spare was a real bonus and a testament to Comdisco's infrastructure and technical capability. Luckily we have never had to invoke, but if we were, we could be up-and-running from Europe or North America well within our deadline."

The test ran for two days, with Direct Line staff operating the systems on the New Jersey-based mainframe from the UK. The satellite link was so successful that they experienced only a 1.5-second delay between both countries.

In addition to covering Direct Line's mainframe, Comdisco also provides the company with cold site recovery. If it were to invoke, this gives the company two months at the Isleworth facility while Comdisco constructs a temporary mainframe site that is designed to last for up to two years.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

September 1996

Comdisco Disaster Recovery Services

President: Nicholas K. Pontikes
6111 North River Road
Rosemont, IL 60018
Phone: (847) 698-3000
(800) 272-9792
Fax: (847) 518-5440
Internet: <http://www.comdisco.com>



Status:	Division
Parent:	Comdisco, Inc.
Employees:	800 (8/96)
Revenue, FYE 9/30/95:	\$267,000,000
Revenue, 9 mos. ending 6/30/96:	\$231,000,000

Key Points

- Comdisco Disaster Recovery Services is a leading global provider of business continuity services.
- In March 1996, the company acquired the customer contracts for CSC CompuSource's alternate facility (hotsite), check processing, and mobile recovery services, extending Comdisco's recovery product set.
- During 1996, Comdisco Disaster Recovery Services has opened business/Workarea Recovery facilities in Seattle, Charlotte, Orlando, Phoenix (11/96), Victoria, and Vancouver and significantly expanded other sites. The additions expand the company's commitment to Workarea Recovery Solutions® and the evolving business continuity needs across all platforms.
- In May 1996, Comdisco announced a relationship with Deutsche Telekom to open disaster recovery facilities in Germany.

Company Description

Comdisco Disaster Recovery Services, founded in 1980, provides business continuity services, specializing in end-to-end recovery. The company has more than 3,200 customers worldwide.

- These services include emergency data processing backup, principally for large system users of IBM and compatible equipment; business (end user) recovery, including work area and voice recovery capabilities; and consulting services in business continuity planning, network services, and data protection throughout the U.S., Canada, and Europe.
- The company also provides backup capabilities for users of AT&T, Digital, FileNet, Hewlett-Packard, Hitachi, IBM, Pyramid, Stratus, Sun, Tandem, and Unisys equipment.
- To date, Comdisco Disaster Recovery Services has supported 249 recoveries worldwide. Disaster declarations occurred as a result of equipment and business outages, fires, floods, and hurricanes.

Comdisco Disaster Recovery Services operates as a division of Comdisco, Inc. a publicly traded, \$2.2 billion technology services company headquartered in Rosemont (IL) that leases and remarkets computers and other high-technology equipment, provides technology planning and asset management services, business continuity services, systems integration, and network services.

Organization and Structure

Comdisco Disaster Recovery Services is headquartered in Rosemont (IL) and has a total of 32 recovery facilities worldwide.

Of Comdisco's 32 locations, eight serve as major data center recovery environments providing essential hot site and/or shell site services.

- These eight regional recovery centers serve major commercial centers, including New York, Chicago, Northern California, Texas, Toronto, London, and Paris.
- Each recovery center can support multiple customers simultaneously and includes telecommunications capabilities, conference rooms, office space, support areas, and appropriate on-site technical personnel.

Workarea Recovery centers are located adjacent to each computer recovery center as well as in other sites. Comdisco's recovery facility locations are as follows:

- Arlington (VA)
- Atlanta (Smyrna, GA)
- Baltimore/Washington (Columbia, MD)
- Boston (Waltham, MA)
- Calgary (Calgary AB)
- Charlotte (Huntersville, NC)
- Chicago (Rosemont, IL)
- Chicago (Wood Dale, IL)
- Dallas (Grand Prairie, TX)
- Denver (Englewood, CO)
- Detroit (Farmington Hills, MI)
- Indianapolis (Indianapolis, IN)
- Los Angeles (Cypress, CA)
- Minneapolis/St. Paul (Minnetonka, MN)
- Montreal (Montreal QB)
- New York/New Jersey (Carlstadt, NJ)
- New York/New Jersey (East Rutherford, NJ)
- New York/New Jersey (North Bergen, NJ)
- Orlando (Winter Haven, FL)
- Philadelphia (Bridgeport, NJ)
- Phoenix (Tempe, AZ)
- San Francisco (San Ramon, CA)
- Seattle (Renton, WA)
- St. Louis (St. Louis, MO)
- Toronto (Mississauga, ON)

- Vancouver (Vancouver, BC)
- Victoria (Victoria, BC)

Outside of North America, Comdisco Disaster Recovery Services has facilities in London, Warrington, Coventry, and Isleworth (England) and Paris (Ageris International, S.A.), with plans to open facilities in Germany in the fall of 1996.

Computer Hardware

Comdisco's computer recovery facilities are equipped with various AT&T, Digital, FileNet, Hewlett-Packard, Hitachi, IBM, Pyramid, Stratus, Sun, Tandem, and Unisys systems as follows:

- Large systems/mainframes: IBM ES/9000, 3090; Hitachi
- Midrange/distributed systems: IBM AS/400, RS/6000; Digital Alpha and VAX; Tandem K20000, Himalaya, Cyclone, and VLX; HP 9000; Unisys 2200/500; Stratus; Sun; AT&T; Pyramid; FileNet
- PC/LAN servers

Advanced Recovery Services (vaulting, journaling, database shadowing, mirroring) are available on all mainframe and midrange/distributed platforms.

Company Strategy

Comdisco Disaster Recovery Services' mission is to deliver integrated solutions that minimize risk by enabling businesses to protect and recreate the flow of information quickly and cost effectively.

During 1994, Comdisco Disaster Recovery Services announced its Project 2000 growth and technology initiative to leverage investments to stimulate growth while

continuing to improve margins and customer satisfaction. The program represents \$300 million in investments through the year 2000 to serve customers' evolving business continuity needs across all platforms.

Specific elements of Comdisco Disaster Recovery Services' strategy include:

- Developing a mainframe backup capability responsive to huge data centers created by mergers, acquisitions, and outsourcing trends
- Expanding network services beyond SNA, frame relay, ATM to address application recovery
- Maintaining industry-leading role in distributed/open systems recovery
- Continuing to assist companies in developing and implementing end-to-end recovery strategies

Financials

Comdisco Disaster Recovery Services' fiscal 1995 revenue reached \$267 million, a 10% increase over fiscal 1994 revenue of \$242 million.

A five-year financial summary is shown on the following page.

Revenue growth in fiscal 1994 and 1995 was primarily the result of the growth in the customer base, products, and services.

Comdisco Disaster Recovery Services management anticipates fiscal 1996 revenue will reach \$290 million, with pretax profits of \$37 million.

**Comdisco Disaster Recovery Services
Five-Year Revenue Summary
(\$ Millions, except per share data)**

Item	Fiscal Year				
	9/95	9/94	9/93	9/92	9/91
Revenue	\$267	\$242	\$216	\$193	\$150
• Percent change from previous year	10%	12%	12%	29%	27%
Pretax earnings	\$29	\$18	\$10	\$18	\$18

Interim Results

Revenue for the nine months ending June 30, 1996 reached \$231 million, a 17% increase over \$197 million for the same period a year ago.

- Pretax earnings were \$30 million, up from \$21 million for the same period a year ago.
- The results for this year include the operations of the network services business of NetforceMTI, which was acquired by Comdisco in December 1995.

Market Financials

Comdisco Disaster Recovery Services' revenue derived from clients in various industries. It is estimated fiscal 1995 revenue was derived approximately as follows:

Manufacturing	29%
Banking	23%
Retail/wholesale	10%
Insurance	10%
Utilities	4%
Financial services	3%
Government and education	2%
Communications	2%
Other services	17%
	100%

Clients range from midsized companies to Fortune 50 firms with global mainframe/distributed system installations and critical usage requirements.

Geographic Markets

Approximately 82% of Comdisco Disaster Recovery Services' fiscal 1995 revenue was derived from the U.S., 12% from Europe, and the remaining 6% from Canada.

A three-year summary of geographic sources of revenue is shown on the following page.

Comdisco Disaster Recovery Services
Three-Year Geographic Source of Revenue Summary
 (\$ Millions)

Geographic Market	Fiscal Year					
	9/95		9/94		9/93	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$219	82%	\$201	83%	\$171	79%
Europe	33	12%	25	10%	29	13%
Canada	15	6%	16	7%	16	7%
Total (a)	\$267	100%	\$242	100%	\$216	100%

(a) Differences due to rounding.

Acquisitions

In March 1996, Comdisco Disaster Recovery Services acquired the assets and contracts of the disaster recovery division of CSC CompuSource, a unit of Computer Sciences Corporation (CSC).

- Under the agreement, Comdisco Disaster Recovery Services acquired customer contracts for CSC CompuSource's alternate facility (hotsite) recovery services, check processing recovery services, Provident mobile recovery, and related assets.
- CSC CompuSource, based in Cary (NC), served the disaster recovery and mobile recovery services market, specializing in low-end IBM mainframe recovery.
- Comdisco gained more than a dozen operations and sales employees from CSC CompuSource along with facilities in Norcross (GA), Tewksbury (MA), and Niles (OH).
- In a separate agreement, Comdisco Disaster Recovery Services was awarded contracts to provide disaster recovery services for CSC's North American facilities.

In December 1995, Comdisco acquired NetforceMTI of Minneapolis (MN). Financial terms were not disclosed.

- NetforceMTI was a privately held communications network services company that provides network assessment, design, planning, implementation, configuration, installation, and management services. In addition to its headquarters location, the company also has offices in Chicago, Cleveland, Des Moines, and Washington, D.C.
- NetforceMTI had approximately 60 employees at the time of the acquisition and revenue of \$20 million for the fiscal year ending October 31, 1995.
- The operations of Netforce have been merged into Comdisco's newly formed Comdisco Network Services division, headed by Mark Johnson, founder and CEO of NetforceMTI, reporting to Comdisco Disaster Recovery Services president, Nicholas K. Pontikes.

Employees

Comdisco Disaster Recovery Services currently has approximately 800 employees,

including approximately 150 international employees.

Key Products and Services

Disaster Recovery

Comdisco Disaster Recovery Services provides business continuity services for the data center and for individual business departments and the corporation as a whole. The company has a total of 5,690 remote recovery seats, as follows:

Emergency response.....	3,245
Business recovery.....	<u>2,445</u>
	5,690

As of September 1996, Comdisco Disaster Recovery Services had approximately 3,200 subscribers worldwide.

Comdisco's disaster recovery facilities are linked via CDRS Net®, the company's private, high-speed fiber backbone network.

- Telecommunications capabilities include SONET-based services, ATM switching, VSAT hubs, Accunet reserved T1.5 services, and NTI Meridian 1 PBX.
- Through CDRS Net, the company offers customers access to its North American facilities, including a range of data processing recovery services at hot sites, Customer Control Centers, and shell sites.
- Hot sites are equipped computer facilities that include central processing units, peripherals, and communications equipment.
- A Customer Control Center interfaces customers to geographically separated hot sites by means of network infrastructure.
- All facilities also include workarea, voice, and network capabilities. Capabilities also

include client/server platforms and midrange systems.

Recovery services are segmented as follows:

- *Large site processing recovery facilities* includes System Center 2000 in North Bergen (NJ), a 166,000 square foot facility with 1,686 MIPS of processing power and 6.5 terabytes of storage capacity. Comdisco Disaster Recovery Services offers recovery solutions for all large systems technologies and provides staff support for all high-end systems, including IBM ES/9000 and S/390, as well as Unisys, Amdahl, and Hitachi systems.
- *Server recovery solutions* are specifically designed for distributed server environments. Recovery sites provide multiple Customer Control Centers and connectivity between vendor systems for complete integrated recovery capabilities.
 - Interoperability and network connectivity with other Comdisco Disaster Recovery Services facilities provide local access, maximum flexibility, and redundancy.
 - Full telecommunications capabilities, from SONET-based services to ATM switching to VSAT technology, support transparent recovery for all types of distributed architectures, including IBM AS/400 and RS/6000, Digital VAX and Alpha, Tandem, Stratus, Hewlett-Packard, Pyramid, AT&T, Sun, and other UNIX and Intel-based systems.
- *Workarea Recovery Solutions* allow customers to relocate key personnel at a Comdisco Disaster Recovery Services Workarea Recovery Center and continue business operations in the event of a disruption. Equipment options include PC/servers, PC/LAN stations, and

communications networks providing access to the technology and data they need to carry on with business as usual.

- A typical Comdisco Disaster Recovery Services work area room is equipped with prewired workstations, data terminals and PCs, telecommunications capabilities, server rooms with print and tape capabilities, and a flex-connect hub for voice and data connectivity.
- Voice Recovery—A typical center contains all equipment needed to re-establish voice communications, including multibutton phonesets, local trunk access for outbound and inbound calling, dedicated inbound 800 number service lines, and a PBX system.
- PCs/Workstations—Comdisco-supplied PCs include Token Ring or Ethernet LAN connections.
- Platforms—Comdisco Disaster Recovery Services can accommodate platforms and data terminals to match a client's working environment, such as AS/400, Hewlett-Packard, Digital, or IBM 3270.
- Server Room—A custom-designed room with ServerBays, LAN Administrator Stations, telephone and device connectivity, and tape capabilities for recovering LAN server equipment.
- Flex-Connect Hub—A Comdisco wiring and interconnect system for flexible configuration of voice and data connectivity.
- Workarea Recovery Centers also offer on-site access to conference rooms and canteens in a secured environment 24-hours, 7 days-a-week.

- *Network recovery* is supported through CDRS Net, the company's global telecommunications network linking all of Comdisco's recovery centers.

Comdisco's Millennium Testing Services allow users or their service providers undergoing Year 2000 conversions to recreate systems in one of the company's North American recovery facilities and test the converted code in a fully loaded environment.

- Three categories of services are provided including qualification tests (assessing the scope of the conversion process), checkpoint tests (status checks throughout the process), and validation tests (once the conversion process is complete).
- The service supports a range of platforms, including IBM mainframes, Unisys, AS/400, RS/6000, Tandem, Digital VAX and Alpha, Stratus, Hewlett-Packard, Pyramid, and Sun Microsystems.

Contracts for business continuity services generally range from two to five years, with a majority of the clients having five-year contracts. Pricing is based on the customer's hardware and configuration requirements.

Professional Services

Comdisco Disaster Recovery Services has approximately 125 consultants dedicated to providing professional services to business continuity clients.

Business Continuity Lifecycle Services include the following services:

- *Capability Benchmark:* Assessment of a client's business continuity program, including their organization, skills, management processes, business exposures, recovery strategy and plans, testing, and continuous improvement.

- **Business Vulnerability Analysis:** Assessment of critical business exposures resulting from a disaster, identification of vulnerabilities in a client's technology infrastructure, and the business processes and information flow enabled by that infrastructure.
- **Recovery Strategy Design:** Assistance with the design and implementation of strategies for recovering critical resources (work areas, data centers, networks, and distributed systems), as well as the applications and information that flow across those resources.
- **Recovery Plan Development:** Design and development of concise, action-oriented plans and the teams necessary to respond to and recover from a disaster.
- **SmarTest Support Services:** Assessment of the cost, quality, and effectiveness of current testing program; as well as providing ongoing test support.
- **Continuous Improvement Services:** Ongoing management of recovery plans, including updated plan documents, recommendations for improvements, and quality assurance.

Enterprise Recovery Management Services include:

- **SelectSourcingSM:** Permits customers to select which of CDRS' services are required.
- **Process Improvement and Knowledge Network:** Development of a repository of well-defined, repeatable processes and tools for building more effective business continuity programs.
- **Benchmarking Business Continuity:** Ongoing comparisons of clients' business continuity program to similar organizations'

programs, facilitating the continuing improvement process and ensuring costs are in line with industry norms.

Comdisco Disaster Recovery Services also offers ComPAS®, a Windows-based business recovery planning software tool that guides customers through a step-by-step process of developing, testing, and implementing integrated continuity plans.

In July 1996, Comdisco announced it is developing a Lotus Notes-based recovery planning product in conjunction with Paragon Bermuda, Ltd. and United System Solutions. The new product, Continue™ for Lotus Notes, is based on ComPAS and provides Notes users with a planning tool for developing an end-to-end recovery solution.

Other

Mobile Recovery Operations Center (COMROC) is a modular, transportable cold site that can be assembled at a customer's location in 7 to 23 days.

- The units come complete with raised flooring security systems, and other critical data center equipment, and can replace an unavailable data center or provide a useable space for a range of corporate functions.
- COMROC ranges in size from 1,200 to 9,600 square feet and was designed for customers in need of long-term recovery environments.

Comdisco Disaster Recovery Services also provides SAP recovery/consulting services and to date has supported eight recoveries.

Advanced Recovery Services allow client organizations to backup their systems or database transaction data to a Comdisco site via CDRS Net or a public network.

- Data recovery solutions for midrange and mainframe systems are offered, as well as solutions designed specifically for local-area networks, distributed, and open operating systems.
- Services include electronic vaulting, remote journaling, database shadowing, standby processing, standby DASD, and hot network nodes.
- With continuous availability services, Comdisco captures customer transaction data continuously and transmits it to a Comdisco Disaster Recovery Services recovery facility in real-time

The company also offers NetSaveSM, an automated backup, retrieval, and restore software package for LANs.

Marketing and Sales

Comdisco Disaster Recovery Services markets its services through a direct sales force.

Alliances

Comdisco Disaster Recovery Services has alliances with a range of vendors including BMC, Compaq, Computer Solutions, DataBase Filetech, Digital, EMC, E-Net, FileNet, Micro Age, Moore Business Products, Pyramid, Sterling Software, and Unisys.

In September 1996, Comdisco and VIASOFT announced they would jointly develop a testing guide that supports both the application- and system-level software test requirements associated with a year 2000 conversion. As part of this relationship, VIASOFT will be actively participating in Comdisco's Millennium Testing Services program.

In late 1995, Comdisco Disaster Recovery Services and EMC Corporation announced joint marketing of EMC's Symmetrix Remote

Data Facility (SRDF) business continuance software. SRDF is designed to provide real-time copies of data between EMC's Symmetrix family of ICDA storage subsystems and enables Comdisco Disaster Recovery Services customers to mirror their critical data and applications from their home site to a Comdisco Disaster Recovery Services recovery facility.

Competition

Comdisco Disaster Recovery Services' primary competitors include IBM ISSC and SunGard Data Systems.

The company also competes with various smaller regional firms in the U.S., Canada, and Europe.

Assessment

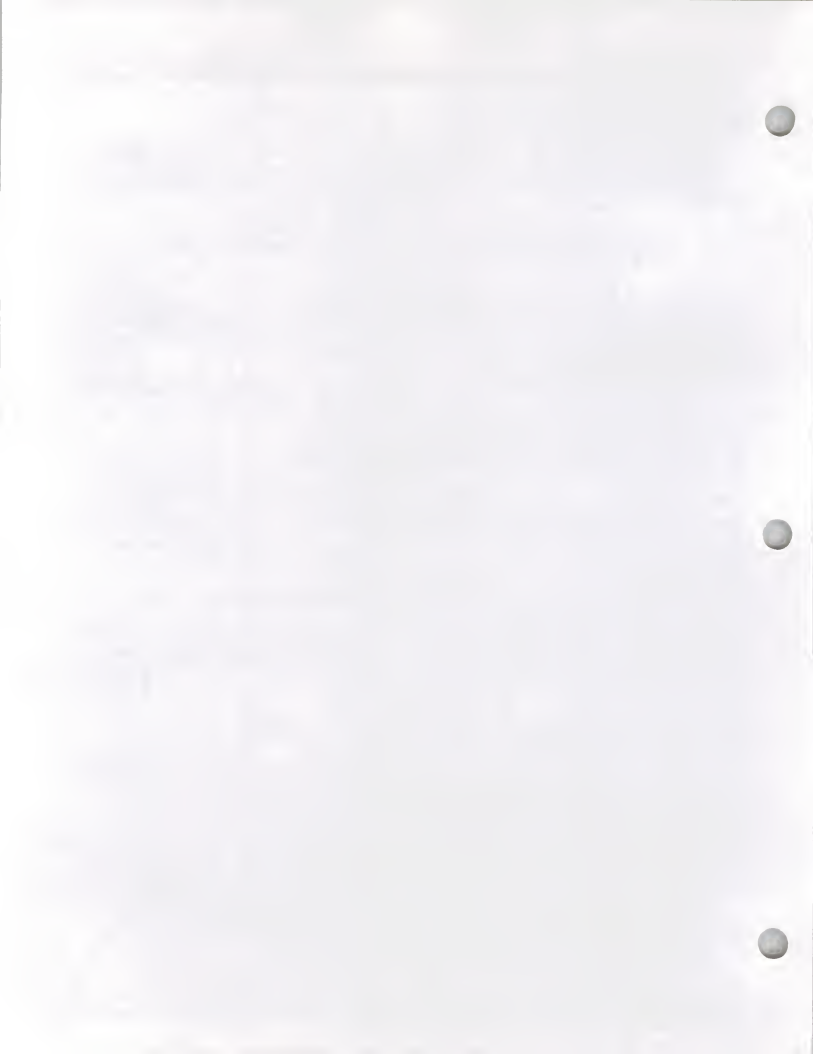
Comdisco Disaster Recovery Services' strengths include:

- Industry leadership in market share and experience
- Marketplace commitment
- Complete solutions set, including leveraging the parent company's technology, leasing, asset management, and network services product offerings

Challenges include helping customers address exposures from increased reliance on technology and the wide-spread distribution of technology.

Parent Company

Comdisco, Inc.
6111 North River Road
Rosemont, IL 60018
Phone: (847) 698-3000



COMPANY PROFILE

COMDISCO DISASTER RECOVERY SERVICES, INC.

6111 North River Road
Rosemont, IL 60018
(708) 698-3000

Raymond R. Hipp, President
Wholly Owned Subsidiary of
Comdisco, Inc.
Total Employees: 505 (9/91)
Total Revenue, Fiscal Year End
9/30/91: \$150,000,000

The Company

Comdisco Disaster Recovery Services, Inc. (CDRS), founded in 1980, provides disaster recovery processing and associated consulting services to subscribers in the U.S., Canada, and the U.K.

- CDRS' parent, Comdisco, Inc., leases and remarkets IBM computers and other high-technology equipment. Comdisco had revenue of over \$2.17 billion and net income of \$69 million for fiscal 1991.

CDRS' fiscal 1991 revenue reached \$150.0 million, a 27% increase over fiscal 1990 revenue of \$118.0 million. Pretax earnings were \$18.0 million, compared to \$14.2 million in fiscal 1990, and \$8.1 million in fiscal 1989. A five-year revenue summary follows:

COMDISCO DISASTER RECOVERY SERVICES, INC. FIVE-YEAR REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR				
	9/91	9/90	9/89	9/88	9/87
Revenue	\$150.0	\$118.0	\$86.9	\$55.5	\$39.3
Percent increase from previous year	27%	36%	57%	41%	41%

CDRS management attributes the company's revenue growth primarily to the growth in its customer base and services offered.

Alliances/agreements announced by CDRS in 1991 include the following:

- In December 1991, CDRS announced it had reached an agreement and has acquired 100% ownership of its U.K.-based joint venture, Failsafe ROC Ltd., from AT&T/Istel, Ltd.

- The original December 1989 agreement between CDRS and AT&T Intel that created Failsafe ROC contained provisions allowing CDRS to gain control of the company over time. CDRS will gain 100% ownership by exercising convertible securities as well as an outright purchase of the remaining shares.
- Failsafe ROC is currently the largest provider of business continuity services in the U.K., both in number of customers and annual revenue. Failsafe ROC operates two Computer Recovery Facilities--one in London and one in the Manchester area of Northern England.
- In April, CDRS and TDS Healthcare Systems Corporation announced a joint marketing agreement to provide business recovery services to users of TDS Healthcare information systems. TDS and CDRS will jointly market business continuity services, including computer recovery, voice recovery, mobile recovery, enhanced networking backup, and a number of related consulting services.
- In April 1991, CDRS announced a joint marketing agreement with Data Assurance Corporation, a Denver-based firm specializing in computer backup services. As part of the agreement, CDRS will use part of Data Assurance's Denver facility as a Business Recovery Facility (BRF) and Data Assurance will market selected CDRS business recovery products as part of its offerings.

As of September 30, 1991, CDRS had approximately 505 employees, compared to 425 employees as of September 1990, segmented as follows:

Marketing/sales	26%
Technical support	52%
Consulting support	14%
General and administrative	5%
International	3%
	100%

CDRS' primary competitor is SunGard Recovery Services (a unit of SunGard Data Systems Inc.).

Key Products and Services

One hundred percent of CDRS' fiscal 1991 revenue was derived from disaster recovery subscriptions and associated contingency planning services.

CDRS has traditionally provided hotsite data center recovery planning and network recovery solutions. During 1990 and 1991, CDRS focused its service offerings to include not only business continuity solutions for the data center, but also for the individual business departments and corporations as a whole. These services are summarized in the exhibit.

EXHIBIT
CDRS SERVICES

FOCUS	DATA CENTER RECOVERY	WORK AREA RECOVERY
PLACE	Computer Recovery Facility COMROC	Business Recovery Facility Work Area Recovery Center Mobile Work Area Center
PLAN	Prevent Business Impact Analysis IS Recovery Planning Quality Assurance	Risk Analysis Business Impact Analysis Work Area Recovery Planning Corporate Planning Quality Assurance
DATA PROTECTION	Vital Records Program Remote Journaling Electronic Vaulting Data Base Shadowing Stand-by Services ComPAS	Vital Records Program LAN Recovery ComPAS ComPAS-BFPM

Place:

Each of the facilities identified provides customers with an alternate location from which they can operate aspects of their business.

- The Computer Recovery Facilities house the major hardware system components necessary to support client processing in the event of a disaster, including CPUs and disks.
- Computer Recovery Facilities are located in Carlstadt and North Bergen (NJ), Wood Dale (IL), Grand Prairie (TX), San Ramon (CA), Toronto (Canada), England, France, and Germany.
- The Business Recovery Facilities support work area recovery needs, "people-oriented" activities, and house the telecommunications and PC-LAN capabilities necessary to interface with the Computer Recovery Facilities.
- Business Recovery Facilities are located adjacent to each Computer Recovery Facility, as well as in Cypress (CA), New

York (NY), Bridgeport (NJ), Smyrna (GA), Sparrows Point (MD), Waltham (MA), St. Louis (MO), Bloomington (MN), Englewood (CO), Indianapolis (IN), Vancouver, Montreal, and Calgary.

Plan:

CDRS, through its Consulting Division, offers clients services that analyze the current environment (data center and work area) to determine the level of risk, exposure, and appropriate recovery strategies. With this information, the consultants assist in development of action-oriented recovery plans.

- The division also offers services centered around training, developing, and implementing effective business continuity programs.
- CDRS has over 70 consultants located across the country to assist clients in this effort.

Data Protection:

A primary concern and focus for every business is the protection of its information asset, whether it be critical paper documents, PC floppy diskettes, optical disks, tapes, or other materials.

- CDRS offers recovery solutions to ensure that all information is protected and available in a timely fashion if recovery is necessary. Solutions recommended focus on the available information to the point of failure.
- In addition to recovery services, CDRS also offers a range of networking services through Comdisco Telecommunications Practice. These services provide recommendations for improving organizational structure, staffing requirements, and training to maximize performance of the network.

CDRS' disaster recovery services are designed to help minimize the impact of a disaster which has caused significant interruption in the operations of, or inaccessibility to, the customer's data processing facility. CDRS data centers, networks, and technical staff provide alternative processing and telecommunications capability during any form of outage.

During fiscal 1991, CDRS successfully handled 13 disaster associated with the New York City power failure, Hurricane Bob, and equipment failures.

- Since its inception, CDRS has supported recoveries from over 72 disasters.

Contracts generally range from two to five years, with a majority of the clients having five-year contracts. Pricing is based on the customer's hardware and configuration requirements.

- Monthly subscription fees range from \$1,000 to \$50,000 and average about \$6,000.
- Notification fees (when the client notifies CDRS that it is experiencing a disaster) range from \$10,000 to \$50,000 (4381 and higher).
- Daily usage fees of a CDRS computer recovery facility range from \$2,500 to \$15,000.

As of September 30, 1991, CDRS had approximately 2,800 subscribers worldwide, compared to approximately 2,400 subscribers at the end of fiscal 1990.

- The number of subscribers in the U.S. and Canada increased from 1,672 in fiscal 1990 to 1,970 in fiscal 1991.
- The company's total number of subscribers increased by about 18% in fiscal 1991, 24% in fiscal 1990, 35% in fiscal 1989, and 92% in fiscal 1988.

Recovery services/products provided by CDRS include the following:

- CDRS Net provides for the integration of strategically located facilities through a dedicated CDRS high-speed telecommunications network. The network, whose final links were completed during 1991, allows subscribers to transparently access any of CDRS' computer recovery facilities in the event of a disaster.
- CDRS' Continuous Availability Service is an enhanced backup recovery capability targeted to customers that record and process their transactions on-line. Examples of these types of customers include banks, brokerage houses, and retail chains.
- Transactions recorded at a customer's data center are simultaneously recorded at a CDRS site, eliminating the need to physically transport backup tapes.

- The service involves direct communications under IBM's SNA and VTAM between the customer's mainframe and a dedicated host at CDRS' computer recovery facility in Carlstadt.
- CDRS uses remote transaction-logging software developed by E-Net Corp, which provides journaling capabilities.
- Comdisco Computing Services Corporation (CCSC), a Carlstadt (NJ)-based wholly owned subsidiary of Comdisco, Inc., oversees CDRS' electronic vaulting services and provides systems operations services to 12 clients. CCSC was formed in August 1988 with the acquisition of the assets of Manufacturers Hanover Data Services Corp.
- CDRS offers a network of fixed and mobile satellite earth stations that can bypass telephone control office switching equipment in the event of a telephone company disaster.
- CDRS' COMROC mobile computer recovery center is an alternative shell solution for the convenience of the customer. Instead of occupying a shell at a CDRS site, CDRS will build a computer recovery center at the customer's site in a parking lot, in a field, or on any available real estate, often within a week of a disaster.
- ComPAS is a disaster recovery software product developed in-house that assists customers in developing, testing, and maintaining a full recovery capability tied to their specific industry and business environment. ComPAS is a relational data base system that contains text editing, project management, a custom architecture, and reporting capabilities.
- ComPAS Business Function Planning module, developed in-house, is a software system designed specifically for plan development in the business functions environment. This package provides the business manager with a Windows-based planning tool that eases and shortens the planning process.
- Comdisco Remote Testing provides customers with access to CDRS recovery centers from their headquarters via a 3270 CRT cluster or a microcomputer.

Industry Markets

CDRS' revenue is derived from clients in various industries, including banking and finance, manufacturing, and insurance. Fiscal 1991 revenue was derived approximately as follows:

Manufacturing	28%
Banking	23%
Retail/wholesale	10%
Insurance	10%
Utilities	4%
Financial services	3%
Government and education	2%
Communications	2%
Other services	<u>18%</u>
	100%

CDRS clients are generally Fortune 1000 companies and/or companies with mainframe installations and critical usage requirements.

Geographic Markets

Approximately 87% of CDRS' fiscal 1991 revenue was derived from the U.S. and 13% from international sources. A three-year summary of source of revenue follows:

**COMDISCO DISASTER RECOVERY SERVICES, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	9/91		9/90		9/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$131.0	87%	\$103.9	88%	\$78.4	90%
Canada	15.0	10%	10.9	9%	5.8	7%
Europe	4.0	3%	3.2	3%	2.7	3%
TOTAL	\$150.0	100%	\$118.0	100%	\$86.9	100%

Computer Hardware and Software

CDRS' North American Computer Recovery Facilities are equipped with various IBM systems, as well as DEC VAX, Tandem, Stratus, and Unisys systems, as follows:

- North Bergen (NJ): IBM 3090-600S, 3081, 4381, AS/400, System/38; DEC VAX; Stratus
- Carlstadt (NJ): 2 IBM 3090-600S; Tandem 8 VLX

- Wood Dale (IL): IBM 3090-600E, 3081, 4381; DEC 6440, 8700; Tandem 4 VLX
- Grand Prairie (TX): IBM 3090-200E, 3081, 4381
- San Ramon (CA): IBM 3090-200E, 3083 J, 4381
- Cypress (CA): DEC 8810
- Toronto (Canada): IBM 3090-400E, 3081, AS/400, System/38; DEC VAX; Unisys 1100/91

COMPANY PROFILE

COMDISCO DISASTER RECOVERY SERVICES, INC.

6111 North River Road
Rosemont, IL 60018
(708) 698-3000

Raymond R. Hipp, President
Wholly Owned Subsidiary of
Comdisco, Inc.
Total Employees: 450 (1/91)
Total Revenue, Fiscal Year End
9/30/90: \$118,000,000

The Company

Comdisco Disaster Recovery Services, Inc. (CDRS), founded in 1980, provides disaster recovery processing and associated consulting services to subscribers in the U.S., Canada, the U.K., and the Asia/Pacific region.

- CDRS' parent, Comdisco, Inc., leases and remarkets IBM computers and other high technology equipment. Comdisco had revenue of over \$1.9 billion and net income of \$95 million for fiscal 1990.

CDRS' fiscal 1990 revenue reached \$118.0 million, a 36% increase over fiscal 1989 revenue of \$86.9 million. Pretax earnings were \$14.2 million, compared to \$8.1 million in fiscal 1989 and \$11.9 million in fiscal 1988. A five-year revenue summary follows:

COMDISCO DISASTER RECOVERY SERVICES, INC. FIVE-YEAR REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR				
	9/90	9/89	9/88	9/87	9/86
Revenue	\$118.0	\$86.9	\$55.5	\$39.3	\$27.9
• Percent increase from previous year	36%	57%	41%	41%	50%

CDRS management attributes the company's revenue growth primarily to the growth in its customer base, partially through acquisition, and services offered.

Alliances/agreements announced by CDRS include the following:

- In October 1990, CDRS and MCI Communications Corporation announced the formation of a strategic marketing alliance that will permit customers to obtain a combination of MCI's data communications services and CDRS' recovery services.
 - MCI and CDRS will work together to design and install customized network rerouting solutions during times of disaster.
 - In addition, MCI will design and implement a data network to support CDRS NET, CDRS' new delivery architecture.
- In July 1990, CDRS and Computer Engineering Systems of Singapore (CES) signed a definitive agreement for inclusion of the CES Singapore Computer Recovery Center into CDRS' global recovery network. Under the agreement, CDRS and CES become partners in the Singapore market. CES will represent CDRS' consulting services and CompAS software, and both organizations will share technology and expertise and will ensure uniformity of their hot-site offerings.
- Also in July 1990, CDRS and Nomura Research Institute (NRI) signed a memorandum of understanding whereby NRI will represent CDRS' consulting services, methodology, and CompAS software in Japan. The companies will explore the hot site and continuous availability services market in Japan, and plan to develop a network of centers in Japan.
- In late 1989, CDRS and U.K.-based Istel Failsafe Ltd. formed Failsafe ROC Ltd., a joint venture providing disaster recovery services to more than 550 U.K. customers.
 - ROC (Recovery Operation Centres Limited), acquired by CDRS in 1988, is a wholly owned subsidiary of CDRS providing disaster recovery services in the U.K.
 - ROC also has the original design for a mobile computer recovery center, which is now marketed by CDRS as COMROC (Comdisco Mobile Recovery Operations Center).
- In June 1989, CDRS and FITB formed AGERIS, Ltd., a joint venture in France that provides disaster recovery services to more than 36 customers.

As of September 30, 1990, CDRS had approximately 425

employees, compared to 350 employees as of September 1989. The company currently has about 450 employees worldwide, segmented as follows:

Marketing/sales	15%
Technical support	65%
General and administrative	<u>20%</u>
	100%

CDRS' primary competitor is SunGard Recovery Services (a unit of SunGard Data Systems Inc.).

Key Products and Services

One hundred percent of CDRS' fiscal 1990 revenue was derived from disaster recovery subscriptions and associated contingency planning services.

CDRS' disaster recovery services are designed to help minimize the impact of a disaster which has caused significant interruption in the operations of, or inaccessibility to, the customer's data processing facility. CDRS data centers, networks, and technical staff provide alternative processing and telecommunications capability during any form of outage.

- During fiscal 1990, CDRS successfully handled 34 customer disasters associated with the Northern California earthquake, Hurricane Hugo, and the New York City power failure.
- Since its inception, CDRS has handled 53 disasters for customers.

CDRS currently operates two types of centers in support of its disaster recovery services, as follows:

- Computer Recovery Facilities house the major hardware system components necessary to support client processing in the event of a disaster, including CPUs and disks.
 - Computer Recovery Facilities are located in Wood Dale (IL); Cypress and San Ramon (CA); Dallas (TX); Carlstadt and North Bergen (NJ); Toronto (Canada); France; England; and the Asia/Pacific region.
- Business Recovery Facilities support "people-oriented" activities, and house the peripherals and telecommunications capabilities necessary to interface with CDRS' Computer Recovery Facilities.

- Business Recovery Facilities are located adjacent to each Computer Recovery Facility, as well as in Cypress (CA), Boston (MA), Baltimore (MD), Minneapolis (MN), and Atlanta (GA).

Contracts generally range from two to five years, with a majority of the clients having five-year contracts. Pricing is based on the customer's hardware and configuration requirements.

- Monthly subscription fees range from \$500 to \$50,000 and average about \$6,000.
- Notification fees (where the client notifies CDRS that it is experiencing a disaster) range from \$10,000 to \$40,000.
- Daily usage fees of a CDRS computer recovery facility range from \$2,000 to \$15,000.

As of September 30, 1990, CDRS had approximately 2,400 subscribers. The company currently has more than 2,500 subscribers worldwide.

- The number of subscribers in the U.S. and Canada increased from over 200 in fiscal 1983 to over 1,760 in fiscal 1990.
- The company's total number of subscribers increased by about 24% in fiscal 1990, 35% in fiscal 1989, and 92% in fiscal 1988.

Recovery services/products provided by CDRS include the following:

- CDRS NET, announced in November 1989, provides for the integration of strategically located facilities through a dedicated CDRS high-speed telecommunications network. The network will allow subscribers to transparently access any of CDRS' computer recovery facilities in the event of a disaster. CDRS is working with MCI on the network, which is scheduled to be fully implemented by July 1991.
- CDRS' continuous availability service is an enhanced backup recovery capability targeted to customers that record and process their transactions on-line. Examples of these types of customers include banks, brokerage houses, and retail chains.
- Transactions recorded at a customer's data center are simultaneously recorded at a CDRS site, eliminating the need to physically transport backup tapes.

- The service involves direct communications under IBM's SNA and VTAM between the customer's mainframe and a dedicated host at CDRS' computer recovery facility in Carlstadt.
- CDRS uses remote transaction-logging software developed by E-Net Corp, which provides journaling capabilities.
- Comdisco Computing Services Corporation (CCSC), a wholly owned subsidiary of CDRS based in Carlstadt (NJ), oversees CDRS' electronic vaulting services and provides systems operations services to 12 clients. CCSC was formed in August 1988 with the acquisition of Manufacturers Hanover Data Services Corp. from Manufacturers Hanover Bank of New York. CCSC also has a four-year contract to continue backup services for Manufacturers Hanover Bank.
- CDRS offers a network of fixed and mobile satellite earth stations which can bypass telephone control office switching equipment in the event of a telephone company disaster.
- CDRS' COMROC mobile computer recovery center is an alternative shell solution for the convenience of the customer. Instead of occupying a shell at a CDRS site, CDRS will build a computer recovery center at the customer's site in a parking lot, in a field, or on any available real estate, within a week of a disaster.
- ComPAS is a disaster recovery software product that uses artificial intelligence and expert system technology to assist customers in developing, testing, and maintaining a full recovery capability tied to their specific industry and business environment.
- Comdisco Remote Testing provides customers with access to CDRS recovery centers from their headquarters via a 3270 CRT cluster or a microcomputer.
- Through Comdisco Disaster Recovery Contingency Services, CDRS provides consulting services to prospective and existing subscribers on how to set up recovery plans.

Industry Markets

CDRS' revenue is derived from clients in various industries, including banking and finance, manufacturing, and insurance. Fiscal 1990 revenue was derived approximately as follows:

Manufacturing	26%
Banking	18%
Retail/wholesale	11%
Insurance	10%
Utilities	9%
Financial services/ securities	4%
Government and education	4%
Other services	<u>18%</u>
	100%

CDRS clients are generally Fortune 1000 companies and/or companies with mainframe installations and critical usage requirements.

Geographic Markets

Approximately 88% of CDRS' fiscal 1990 revenue was derived from the U.S. and 12% from international sources. A two-year summary of source of revenue follows:

COMDISCO DISASTER RECOVERY SERVICES, INC. TWO-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY (\$ millions)

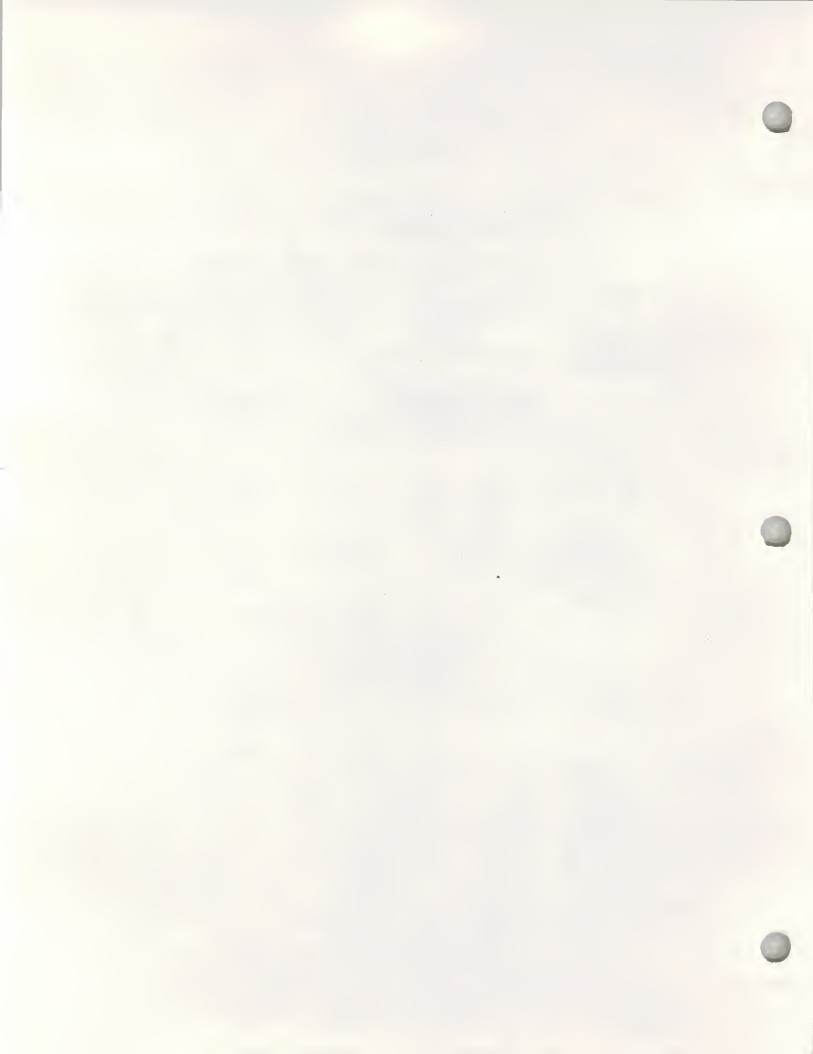
ITEM	FISCAL YEAR			
	9/90		9/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$103.9	88%	\$78.4	90%
Canada	10.9	9%	5.8	7%
Europe	3.2	3%	2.7	3%
TOTAL	\$118.0	100%	\$86.9	100%

CDRS has expanded its operations in Europe and the Pacific Rim. As previously described, alliances were formed during 1990 with firms in Singapore and Japan, and other recovery offerings are under discussion in Australia, Malaysia, Hong Kong, and Taiwan.

Computer Hardware and Software

CDRS' North American Computer Recovery Facilities are equipped with various IBM systems, as well as DEC VAX, Tandem, Stratus, and Unisys systems, as follows:

- Wood Dale (IL): IBM 3090-400E, 4381, 3081 KX3; DEC VAX; Tandem VLX
- San Ramon (CA): IBM 3090-200E, 3083 J, 4381
- Cypress (CA): DEC VAX
- Dallas: IBM 3090-200E, 3081, 4381
- Carlstadt (NJ): IBM 3090-600S, 3090-200E; Tandem
- North Bergen (NJ): DEC VAX; IBM AS/400, System 38, 3090-600S, 3090-200E, 3081 KX3, 4381; Stratus
- Bridgeport (NJ): IBM 3090-200E, 4381
- Toronto (Canada): IBM 3090-400E, 3081, AS/400, System 38; DEC VAX; Unisys



COMPANY PROFILE

COMDISCO DISASTER RECOVERY SERVICES, INC.

6111 North River Road
Rosemont, IL 60018
(708) 698-3000

Raymond R. Hipp, President
Wholly Owned Subsidiary of
Comdisco, Inc.
Total Employees: 370 (3/90)
Total Revenue, Fiscal Year End
9/30/89: \$86,900,000

The Company

Comdisco Disaster Recovery Services, Inc. (CDRS), founded in 1980, provides disaster recovery processing and associated consulting services to subscribers in the U.S., Canada, and the U.K.

- CDRS' parent, Comdisco, Inc., leases and remarkets IBM computers and other high technology equipment. Comdisco had revenue of \$1.7 billion and net income of \$108 million for fiscal 1989.

CDRS' fiscal 1989 revenue reached \$86.9 million, a 57% increase over fiscal 1988 revenue of \$55.4 million. Pre-tax earnings were \$8.1 million in fiscal 1989, compared to \$11.9 million in fiscal 1988. A five-year revenue summary follows:

COMDISCO DISASTER RECOVERY SERVICES, INC. FIVE-YEAR REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR				
	9/89	9/88	9/87	9/86	9/85
Revenue	\$86.9	\$55.5	\$39.3	\$27.9	\$18.6
• Percent increase from previous year	57%	41%	41%	50%	60%

CDRS management attributes the company's revenue growth primarily to the growth in its customer base, partially through acquisition, and services offered.

Recent acquisitions include the following:

- In November 1988, CDRS completed the acquisition of Computer Recovery Facility, Inc. (CRF) of Toronto (Canada). The purchase price was approximately \$24 million.
 - The acquisition provides CDRS with its first Canadian "hot" site to serve existing CDRS Canadian customers, as well as more than 80 Canadian customers from CRF. The CRF site also provides CDRS with disaster recovery capabilities for Unisys equipment.
- In August 1988, CDRS acquired Manufacturers Hanover Data Services Corp. (MHDSC) from Manufacturers Hanover Bank of New York. Terms of the purchase were not disclosed.
 - MHDSC, with approximately 30 employees, provided backup services to Manufacturers Hanover Bank. It now operates as Comdisco Computing Services Corporation (CCSC), a wholly owned subsidiary of CDRS based in Carlstadt (NJ), overseeing CDRS' new electronic vaulting services.
 - CCSC also has a four-year contract to continue backup services for Manufacturers Hanover Bank.
- In June 1988, CDRS acquired Recovery Operation Centres Limited (ROC) for approximately \$7.5 million.
 - ROC is a U.K.-based firm that provides disaster recovery services to over 450 clients located throughout Great Britain.
 - ROC also has the original design for a mobile computer recovery center, which is now marketed by CDRS as COMROC (Comdisco Mobile Recovery Operations Center).
 - CDRS plans to use ROC as a base for its entry into the U.K. "hot" site market.
 - In late 1989, CDRS and U.K.-based Istel Failsafe Ltd. formed Failsafe ROC Ltd., a joint venture providing disaster recovery services to more than 550 U.K. customers.

In June 1989, CDRS and FITB formed AGERIS, Ltd., a joint venture in France that provides disaster recovery services to more than 36 customers.

As of September 30, 1989 CDRS had approximately 350 employees, compared to 300 employees as of September 1988. The company currently has about 370 employees worldwide, segmented as follows:

Marketing/sales	55
Technical support	246
General and administrative	<u>69</u>
	370

CDRS' primary competitor is SunGard Recovery Services (a unit of SunGard Data Systems Inc.).

Key Products and Services

One hundred percent of CDRS' fiscal 1989 revenue was derived from disaster recovery subscriptions and associated contingency planning services.

CDRS' disaster recovery services are designed to help minimize the impact of a disaster which has caused significant interruption in the operations of, or inaccessibility to, the customer's data processing facility. CDRS data centers, networks, and technical staff provide alternative processing and telecommunications capability during any form of outage.

- Since its inception, CDRS has handled 31 disasters for customers, representing approximately 423 production processing days.

CDRS currently operates two types of centers in support of its disaster recovery services, as follows:

- Computer Recovery Facilities house the major hardware system components necessary to support client processing in the event of a disaster, including CPUs and disks.
 - Computer Recovery Facilities are located in Wood Dale (IL); Cypress and San Ramon (CA); Dallas; Carlstadt, North Bergen, and Bridgeport (NJ); Toronto; France; and England.
- Business Recovery Facilities support "people-oriented" activities, and house peripherals and telecommunications capabilities necessary to interface with CDRS' Computer Recovery Facilities.
 - Business Recovery Facilities are located adjacent to each Computer Recovery Facility, as well as in Cypress (CA) and Atlanta (GA).

Contracts generally range from two to five years, with a majority of the clients having five-year contracts. Pricing is based on the customer's hardware and configuration requirements.

- Monthly subscription fees range from \$500 to \$50,000 and average about \$6,000.
- Notification fees (where the client notifies CDRS that it is experiencing a disaster) range from \$10,000 to \$40,000.
- Daily usage fees (of a CDRS computer recovery facility) range from \$2,000 to \$15,000.

CDRS currently has more than 2,200 subscribers worldwide.

- The number of subscribers in the U.S. and Canada has increased from over 200 in fiscal 1983 to over 1,600 in fiscal 1989.
- The company's total number of subscribers increased by about 35% in fiscal 1989 and 92% in fiscal 1988.

New products/services announced by CDRS include the following:

- CDRS Net, introduced in November 1989, provides for the integration of strategically located facilities through a dedicated high-speed telecommunications CDRS network. The network will allow subscribers to transparently access any of CDRS' computer recovery facilities in the event of a disaster. CDRS Net is scheduled to be fully implemented by July 1991.
- CDRS' electronic vaulting service is an enhanced backup recovery capability targeted to customers that record and process their transactions on-line. Examples of these types of customers include banks, brokerage houses, and retail chains.
 - Transactions recorded at a customer's data center are simultaneously recorded at a CDRS site, eliminating the need to physically transport backup tapes.
 - The service involves direct communications under IBM's SNA and VTAM between the customer's mainframe and a dedicated host at CDRS' computer recovery facility in Carlstadt (NJ).
 - CDRS uses remote transaction-logging software developed by E-Net Corp, which provides journaling capabilities.
- CDRS now offers a network of fixed and mobile satellite earth stations which can bypass telephone control office switching equipment in the event of a telephone company disaster.

- CDRS' COMROC mobile computer recovery center is an alternative shell solution for the convenience of the customer. Instead of occupying a shell at a CDRS site, CDRS will build a computer recovery center at the customer's site in a parking lot, in a field, or on any available real estate, within a week of a disaster.
- ComPAS is a disaster recovery software product that uses artificial intelligence and expert system technology to assist customers in developing, testing, and maintaining a full recovery capability tied to their specific industry and business environment.

Other CDRS services include the following:

- Comdisco Remote Testing, which was implemented nationally during fiscal 1987, provides customers access to CDRS recovery centers from their headquarters via a 3270 CRT cluster or a microcomputer.
- Through Comdisco Disaster Recovery Contingency Services, CDRS provides consulting services to prospective and existing subscribers on how to set up recovery plans.

Industry Markets

CDRS' revenue is derived from clients in various industries, including banking and finance, manufacturing, and insurance. Fiscal 1989 revenue was derived approximately as follows:

Banking	29%
Manufacturing	25%
Services	11%
Insurance	10%
Government and education	4%
Other	<u>21%</u>
	100%

CDRS clients are generally Fortune 1000 companies and/or companies with mainframe installations and critical usage requirements.

Geographic Markets

Approximately 90% (\$78.4 million) of CDRS' fiscal 1989 revenue was derived from the U.S., 7% (\$5.8 million) from Canada, and 3% (\$2.7 million) from the U.K.

Of CDRS' 2,200 clients, approximately 1,600 are located in North America and 600 in Europe.

Computer Recovery Facilities are located in Wood Dale (IL); Cypress and San Ramon (CA); Dallas; Carlstadt, North Bergen, and Bridgeport (NJ); Toronto; France; and England.

Business Recovery Facilities are located adjacent to each Computer Recovery Facility, as well as in Cypress (CA) and Atlanta.

CDRS is planning to expand its operations in Europe and the Pacific Rim.

Computer Hardware and Software

CDRS' North American Computer Recovery Facilities are equipped with various IBM systems, as well as DEC VAX and Tandem systems, as follows:

- Wood Dale (IL): IBM 3090-300E, 180S, 4381, 3081; DEC VAX; Tandem
- San Ramon (CA): IBM 3090-200E, 4381
- Cypress (CA): DEC VAX, with BRF to San Ramon
- Dallas: IBM 3081, 3090-200E
- Carlstadt (NJ): IBM 3090-600S; Tandem
- North Bergen (NJ): DEC VAX; IBM AS/400, System 38, 3090-200E, 3090-400E, 3081, 4381
- Bridgeport (NJ): IBM 3090-200E, 4381
- Toronto (Canada): IBM 3090-400E, 3081, AS/400, System 38; DEC VAX; Unisys

COMPANY PROFILE

COMDISCO DISASTER RECOVERY SERVICES, INC.

6400 Shafer Court
Rosemont, IL 60018
(312) 698-3000

Raymond R. Hipp, President
Wholly Owned Subsidiary of
Comdisco, Inc.
Total Employees: 300
Total Revenue, Fiscal Year End
9/30/88: \$55,500,000

The Company

Comdisco Disaster Recovery Services, Inc. (CDRS), founded in 1980, provides disaster recovery processing and associated consulting services to subscribers in the U.S., Canada, and the U.K.

- CDRS' parent, Comdisco, Inc., leases and remarkets IBM computers and other high technology equipment. Comdisco had revenue of \$1.3 billion and net income of \$17 million for fiscal 1988.

CDRS' fiscal 1988 revenue reached \$55.5 million, a 41% increase over fiscal 1987 revenue of \$39.3 million. Pre-tax earnings rose 18%, from \$10.1 million in fiscal 1987 to \$11.9 million in fiscal 1988. A five-year financial summary follows:

COMDISCO DISASTER RECOVERY SERVICES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM	FISCAL YEAR				
	9/88	9/87	9/86	9/85	9/84
Revenue	\$55.5	\$39.3	\$27.9	\$18.6	\$11.6
• Percent increase from previous year	41%	41%	50%	60%	78%
Income (loss) before taxes	\$11.9	\$10.1	\$6.3	\$1.7	\$(2.0)
• Percent increase from previous year	18%	60%	271%	185%	31%

CDRS management attributes the company's revenue growth primarily to the growth in its customer base and services offered.

Recent acquisitions include the following:

- In August 1988, CDRS announced the acquisition of Computer Recovery Facility, Inc. (CRF) of Toronto (Canada). The acquisition provides CDRS with its first Canadian "hot" site to serve existing CDRS Canadian customers, as well as more than 80 Canadian customers from CRF. The CRF site also provides CDRS with disaster recovery capabilities for Unisys equipment.
- In August 1988, CDRS acquired Manufacturers Hanover Data Services Corp. (MHDSC) from Manufacturers Hanover Bank of New York. Terms of the purchase were not disclosed.
 - MHDSC, with approximately 30 employees, provided backup services to Manufacturers Hanover Bank. It now operates as Comdisco Computing Services Corporation (CCSC), a wholly owned subsidiary of CDRS based in Carlstadt (NJ), overseeing CDRS' new electronic vaulting services.
 - CCSC also has a four-year contract to continue backup services for Manufacturers Hanover Bank.
- In June 1988, CDRS acquired Recovery Operation Centres Limited (ROC) for approximately \$7.5 million.
 - ROC is a U.K.-based firm that provides disaster recovery services to over 450 clients located throughout Great Britain.
 - ROC also has the original design for a mobile computer recovery center, which is now marketed by CDRS as COMROC (Comdisco Mobile Recovery Operations Center).
 - CDRS plans to use ROC as a base for its entry into the U.K. "hot" site market.

As of September 30, 1988 CDRS had approximately 300 employees, compared to 125 employees as of September 1987.

CDRS' primary competitor is SunGard Recovery Services (a unit of SunGard Data Systems Inc.)

Key Products and Services

One hundred percent of CDRS' fiscal 1988 revenue was derived from disaster recovery subscriptions and associated consulting services.

CDRS offers disaster recovery services through nine recovery

centers located throughout the U.S., Canada, and the U.K. with 17 fully configured "hot" sites and 13 shells or "cold" sites.

- "Hot" sites are fully-equipped computer facilities that include central processors, peripherals, and communications equipment.
- During fiscal 1987 CDRS added IBM 3090-400E mainframes, 3380E DASD, and 3480 tape drive systems to its recovery centers. Teleprocessing capabilities were expanded by adding Hughes Communications satellite technology.
- During fiscal 1988 CDRS opened new hot sites in Atlanta and New Jersey, and a hot site in Canada was acquired with Computer Recovery Facility, Inc. In October 1988, CDRS opened an additional hot site in southern California.
- Out of the 16 hot site locations in the U.S., 13 received more advanced or upgraded computers during 1988.
- CDRS is also doubling its Tandem backup capability, expanding its DEC backup facilities from one to three sites, and providing IBM System 38 backup capability.
- Currently, CDRS is conducting a customer requirements survey to determine customer needs before installing an IBM AS/400 computer.
- A "cold" site or "shell" contains all the power, environmental, and support equipment, as well as the communications and networking equipment required for a large computer, but has no actual computer equipment.

The number of subscribers in the U.S. and Canada has increased from over 200 in fiscal 1983 to over 1,000 in fiscal 1988. During fiscal 1988, the number of subscribers increased by approximately 30% and three hot sites were added. A three-year summary of the number of subscribers and facilities provided by CDRS follows:

ITEM	9/88	9/87	9/86
Subscribers	+ 1,000	+ 700	+ 600
Hot sites	16	13	11
Shells	13	14	14

- The company currently has 17 hot sites and approximately 1,500 subscribers (including clients of businesses acquired during 1988).

New products/services announced by CDRS during fiscal 1988 include the following:

- CDRS' newest service, electronic vaulting, is an enhanced backup recovery capability targeted to customers that record and process their transactions on-line. Examples of these types of customers include banks, brokerage houses, and retail chains.
- Transactions recorded at a customer's data center are simultaneously recorded at a CDRS site, eliminating the need to physically transport backup tapes.
- The service involves direct communications under IBM's SNA and VTAM between the customer's mainframe and a dedicated host at CDRS' hot site in Carlstadt (NJ).
- CDRS now offers a network of fixed and mobile satellite earth stations which can bypass telephone control office switching equipment in the event of a disaster.
- CDRS' COMROC mobile computer recovery center is an alternative shell solution for the convenience of the customer. Instead of occupying a shell at a CDRS site, CDRS will build a computer recovery center at the customer's site in a parking lot, in a field, or on any available real estate, within a week of a disaster.
- ComPAS is a disaster recovery software product that uses artificial intelligence and expert system technology to assist customers in developing, testing, and maintaining a full recovery capability tied to their specific industry and business environment.

Other CDRS services include the following:

- Comdisco Remote Testing, which was implemented nationally during fiscal 1987, provides customers access to CDRS recovery centers from their headquarters via a 3270 CRT cluster or a microcomputer.
- Through Comdisco Disaster Recovery Contingency Services, CDRS provides consulting services to prospective and existing subscribers on how to set up recovery plans.

Industry Markets

CDRS' revenue is derived from clients in various industries, including retail, banking and finance, and manufacturing.

Clients for CDRS' services include Household International, A.M. Castle & Company, and CECO Corporation.

Geographic Markets

CDRS' revenue is derived from the U.S., Canada, and the U.K.

Recovery centers are located in Cypress and San Ramon (CA), Atlanta (GA), Wood Dale (IL), Indianapolis (IN), St. Louis (MO), Bridgeport and Grand Prairie (TX), Carlstadt and North Bergen (NJ), and Montreal and Toronto (Canada).

CDRS is planning to establish operations in Germany and France during fiscal 1989 and has begun exploring the Japanese market.

Computer Hardware and Software

CDRS hot sites are equipped with various IBM systems (including IBM 3090-400E computers), as well as DEC VAX, Tandem, and Unisys systems.

COMPANY PROFILE

COMDISCO DISASTER RECOVERY SERVICES, INC.

6400 Shafer Court
Rosemont, IL 60018
(312) 698-3000

Raymond R. Hipp, President
Wholly Owned Subsidiary of Comdisco, Inc.

Total Employees: 125
Total Revenue, Fiscal Year End
9/30/87: \$39,300,000

The Company

Comdisco Disaster Recovery Services, Inc. (CDRS), founded in 1980, provides disaster recovery processing and associated consulting services to over 700 subscribers in the U.S. and Canada.

- CDRS' parent, Comdisco, Inc., leases and remarkets IBM computers and other high technology equipment. Comdisco had revenue of \$1.2 billion and net income of \$94 million for fiscal 1987.

CDRS' fiscal 1987 revenue reached \$39.3 million, a 41% increase over fiscal 1986 revenue of \$27.9 million. Pre-tax earnings rose 60%, from \$6.3 million in fiscal 1986 to \$10.1 million in fiscal 1987. A five-year financial summary follows:

COMDISCO DISASTER RECOVERY SERVICES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM	FISCAL YEAR				
	9/87	9/86	9/85	9/84	9/83
Revenue	\$39.3	\$27.9	\$18.6	\$11.6	\$6.5
• Percent increase from previous year	41%	50%	60%	78%	N/A
Income (loss) before taxes	\$10.1	\$6.3	\$1.7	\$(2.0)	\$(2.9)
• Percent increase (decrease) from previous year	60%	271%	185%	31%	N/A

CDRS management estimates that the company will continue to achieve annual growth rates of 40%.

As of September 30, 1987 CDRS had approximately 125 employees, compared to 91 employees as of September 1986.

Key Products and Services

One hundred percent of CDRS' fiscal 1987 revenue was derived from disaster recovery subscriptions and associated consulting services.

CDRS offers disaster recovery services through 13 recovery centers known as "hot" sites and 14 shells or "cold" sites located throughout the U.S. and Canada.

- "Hot" sites are fully-equipped computer facilities that include central processors, peripherals, and communications equipment.
- During fiscal 1987 CDRS added IBM 3090-400E mainframes, 3380E DASD, and 3480 tape drive systems to its recovery centers. Teleprocessing capabilities were expanded by adding Hughes Communications satellite technology.
- A DEC VAX recovery center is now operational in northern New Jersey. A Tandem recovery center will be established in New Jersey during fiscal 1988.
- A "cold" site or "shell" contains all the power, environmental, and support equipment, as well as the communications and networking equipment required for a large computer, but has no actual computer equipment.
- The number of subscribers has increased from over 200 in fiscal 1983 to over 700 in fiscal 1987. During fiscal 1987, the number of subscribers increased 23% and two hot sites were added. A two-year summary of the number of subscribers and facilities provided by CDRS follows:

ITEM	9/87	9/86
Subscribers	+ 700	+ 600
Hot sites	13	11
Shells	14	14

- The company currently has approximately 900 subscribers.
- Comdisco Remote Testing, which was implemented nationally during fiscal 1987, provides customers access to CDRS recovery centers from their headquarters via a 3270 CRT cluster or a microcomputer.
- Clients for CDRS' services include Household International, A.M. Castle & Company, and CECO Corporation.

Through Comdisco Disaster Recovery Contingency Services, CDRS provides consulting services to prospective and existing subscribers on how to set up recovery plans.

Industry Markets

CDRS' revenue is derived from clients in various industries, including retail, banking and finance, and manufacturing.

Geographic Markets

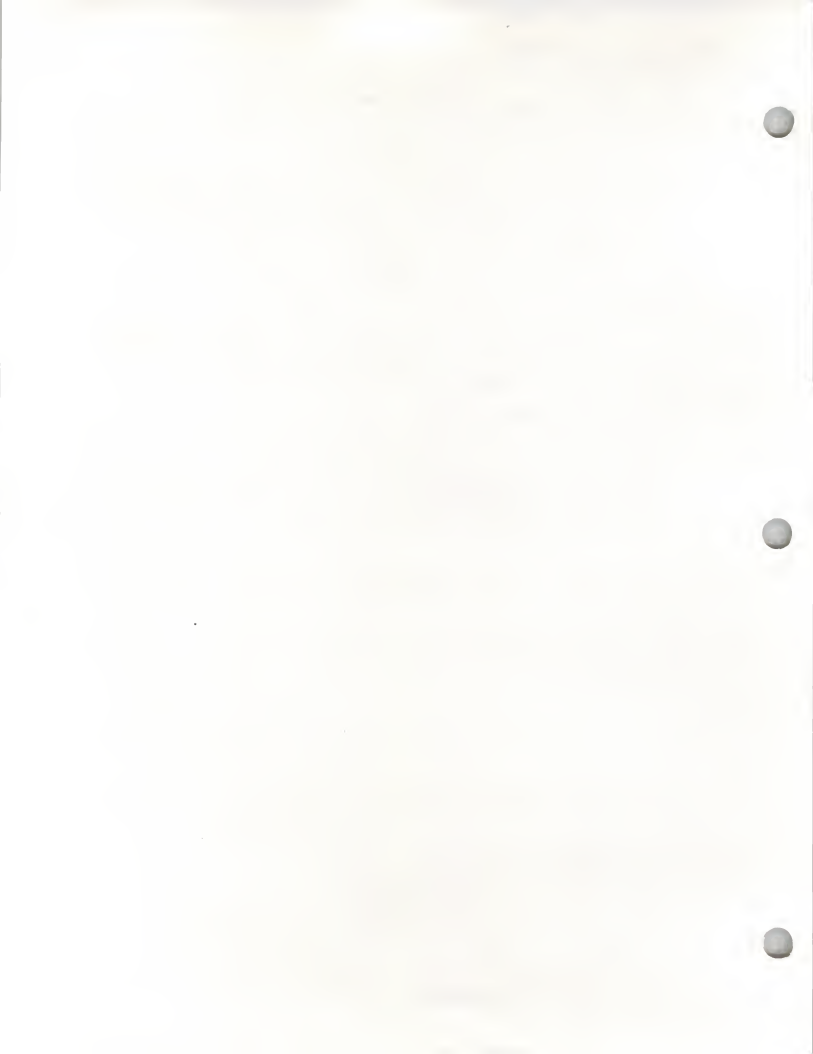
CDRS' revenue is derived from the U.S. and Canada.

Recovery centers are located in Cypress and San Ramon (CA), Atlanta (GA), Wood Dale (IL), Indianapolis (IN), St. Louis (MO), Bridgeport and Grand Prairie (TX), and Montreal and Toronto (Canada).

CDRS is planning to expand into European markets.

Computer Hardware and Software

CDRS hot sites are equipped with various IBM systems, including IBM 3090-400E computers. DEC VAX systems are installed in New Jersey.



COMPANY HIGHLIGHT

**COMMAND CONTROL AND
COMMUNICATIONS CORPORATION**
23670 Hawthorne Boulevard
Torrance, CA 90505
(213) 373-9651

Malcolm K. Beyer, Jr., President
Private Corporation
Total Employees: 220
Total Revenue, Fiscal Year End
8/31/83: \$16,800,000

THE COMPANY

- Command Control and Communications Corporation (4C), founded in 1972, specializes in military command, control, communications, and intelligence systems. 4C provides professional services and custom turnkey systems, primarily to the military sector.
- Fiscal 1983 revenue reached \$16.8 million, a 17% increase over fiscal 1982 revenue of \$14.3 million. A five-year revenue summary follows:

4C
FIVE-YEAR REVENUE SUMMARY
(\$ thousands)

ITEM \ FISCAL YEAR	8/83	8/82	8/81	8/80	8/79
Revenue	\$ 16,800	\$ 14,300	\$ 17,700	\$ 16,000	\$ 7,600
Percent increase (decrease) from previous year	17%	(19%)	11%	111%	N/A

- 4C currently has 220 employees, segmented as follows:

Marketing/sales	10
Research and development	44
Programmers and analysts	25
Field service	24
Computer operations	6
Manufacturing	11
General, administrative, and other	<u>100</u>
	220
- Major competitors include Litton Industries, Logicon, Computer Sciences Corporation, and Systems Development Corporation.

KEY PRODUCTS AND SERVICES

- One hundred percent of 4C's fiscal 1983 revenue was derived from professional services.
- Professional services provided by 4C include the design and development of military command, control, communications, and intelligence (C³I) processing systems, integrating Data General, Rolm, and Point 4 equipment.
 - 4C performs requirements analysis, concept development, hardware/software analysis and selection, production, integration, simulation, systems tests, and data manipulation.
 - 4C develops and produces C³I systems that operate from fixed and mobile sites, packaged for use in environmentally controlled areas, military shelters, and full MIL SPEC (Military Specification) environments.
 - The systems are fully compatible with JINTACCS (Joint Interoperability Tactical Command and Control Systems) message standards and have been used to test the compatibility and interoperability of most U.S. Tactical Systems. 4C systems communicate through tactical or commercial lines, in encrypted or nonencrypted modes.
- C³I systems developed by 4C and adapted for clients under professional services contracts include the following:
 - The Multi-Mode Operations and Display System (MODS), first developed in 1980, is a low-cost military command and control system.
 - Basic functions performed include air control, ground unit control, terrain analysis, intelligence data processing, track initiation, tracking, message processing, message generation, data reduction, and data analysis.
 - 4C has supplied MODS-type systems to the Federal Republic of Germany, Maritime Headquarters, and the Republic of China (Taiwan).
 - In 1982 4C introduced RADIC (Rapidly Deployable Integrated Command and Control), a transportable and modularized system for controlling and coordinating the employment of a range of air weapons as well as ground and sea forces.
 - Capabilities include the following:
 - Receiving and processing track information, orders, commands, and status data received via digital data links from other command and control systems.

COMMAND CONTROL AND COMMUNICATIONS CORPORATION

- Displaying the real-time tactical air situation on operator consoles based on all system inputs, manual and automatic. Display information includes both computer-generated graphics (track symbols, velocity vectors, and map lines), as well as alphanumeric data and radar and IFF video.
- Hardware components consist of functional modules, each contained in a man-transportable transit case designed to be stacked inside a shelter or building. Modules include the operator console, data processor, digital communications, peripheral and communication equipment, data terminal, power amplifier, radar interface, and radar simulator.
- Nine RADIC systems have been delivered. Clients include the U.S. Air Force, the Army at Huntsville (AL), Raytheon, Northrop, and Singer-Kearfott.
- 4C has developed a variety of communications/translator/buffer systems for use by the military to exchange tactical information on dissimilar data links, including the following:
 - In 1983 4C began developing the Data Processing and Display Subsystem (DPDS) for the United Kingdom's Ship-Shore-Ship Buffer (SSSB) Program. The SSSB provides for the exchange of tactical information between Link 1-, Link 11-, and Link 14-equipped systems. 4C is responsible for designing, developing, and testing both the hardware and software components that make up the DPDS.
 - In January 1984 4C began a 29-month, \$5.7 million contract with the Defense Procurement Agency, Ministry of Defense of the Republic of Korea, to design and build the Microwave Interface Unit (MIU). The MIU multiplexes up to four channels of voice and data through encryption devices onto a single 9600-bit-per-second narrow-band microwave channel.
 - For the U.S. Army, 4C has developed an automated message storage, switching, control, and forwarding system that interfaces with tactical and commercial teletype and cryptographic equipment.
 - A system developed for the Army by 4C controls and monitors internal voice and external radio communications networks.
 - 4C Message Switching and Control Systems are being used by the U.S. Army, Fort Monmouth (NJ) to store, forward, and verify all military services' JINTACCS communications.

COMMAND CONTROL AND COMMUNICATIONS CORPORATION

- The Simulation, Monitoring, and Training for Command and Control (SIMTRACC^{T.M.}) system developed by 4C in 1976 is a turnkey system used to simulate any major military command and control system by emulating sensor and data inputs and concurrently performing data extraction and analysis.
 - The SIMTRACC system is a customized modular system offered in configurations for both commercial and military use.
 - Sensor simulation is provided by 4C's Environmental Simulation Unit, which emulates digital and analog sensor inputs, including radar performance parameters and environmental characteristics, such as noise, jamming, ground clutter, terrain, chaff, weather, aircraft type, and aircraft.
 - Scenario generation and replay capabilities permit a tactical situation to be repeated for analysis, operator training, and unit effectiveness evaluation.
 - SIMTRACC is based on Point 4 and Data General NOVA and ECLIPSE computers.
 - Over 20 SIMTRACC systems have been delivered. Systems are presently in operation at U.S. Military installations, NATO installations, various defense industry test labs, E-Systems, Sperry-Univac, Raytheon, Singer-Kearfott, and Hughes Aircraft.
 - In 1983 4C introduced The Expanded SIMTRACC (EXSIM), a mobile simulator that can be transported to any given site in its portable case or mounted in a van.
 - EXSIM generates pre-scripted or on-line scenarios for radar and data link simulation to control real-time test/training events, exercise process monitoring, and data recording. Simulation can also be mixed with live sensor data.
 - EXSIM is based on Data General S/120 microECLIPSE and Point 4 computers.
 - Two EXSIM systems have been delivered. Systems are currently operational in the U.S. Army Missile Systems Software Center, Guidance and Control Directorate, U.S. Army Missile Laboratory, Redstone Arsenal (AL), and at Northrop Industries.
- Since 1970 4C has participated in the principal joint service interoperability testbeds, TACS/TADS and JINTACCS. SIMTRACC systems were used by the U.S. Army, Marine Corps, and Air Force to verify their readiness for TACS/TADS interoperability.

COMMAND CONTROL AND COMMUNICATIONS CORPORATION

- In 1979 4C was selected as the prime contractor to provide the Joint Interface Test System (JITS) for JINTACCS. This five-year program will verify the ability of U.S. Army, Navy, Air Force, Marines, Defense Intelligence Agency, and National Security Agency C³I systems to interoperate over tactical data links.
- 4C has developed specialized systems software as part of C³I system professional services projects, including the following:
 - Command Control Operating System (CCOS).
 - Intertask Communications Utility (TCOM).
 - CMS-2 compiler.
 - COS MOS, a software configuration manager.
 - BLOCKFLOW, a software documentation utility.
 - GLCS, a generalized graphics package.
- 4C also manufactures modems, buffers, radar/IFF simulator processors, and display systems in support of C³I system development.
- Integrated Logistics Support Services are provided by 4C covering operator training, maintenance training, spares provisioning, life cycle cost, level of repair, maintainability, reliability, and availability analysis.

INDUSTRY MARKETS

- Approximately 65% of 4C's fiscal 1983 revenue was derived from the U.S. government, 5% from foreign governments, and 30% from the commercial discrete manufacturing industry.
 - Government clients include the U.S. Army, Air Force, Navy, and Marine Corps, NATO, Taiwan, and the German Navy.
 - Commercial clients include Computer Sciences Corporation, IBM, Rockwell International, Raytheon, Sperry, Singer-Kearfott, Hughes Aircraft, and E-Systems.

GEOGRAPHIC MARKETS

- Approximately 95% of 4C's fiscal 1983 revenue was derived from the U.S. The remaining 5% was derived from foreign sources, including Taiwan, Korea, Belgium, Germany, and Saudi Arabia.
- Field offices are located in El Paso, Fort Monmouth (NJ), Honolulu, Huntsville (AL), and San Diego.

COMMAND CONTROL AND COMMUNICATIONS CORPORATION

COMPUTER HARDWARE AND SOFTWARE

- 4C has the following computers installed at its headquarters data center for system development:
 - 7 Data General ECLIPSEs.
 - 6 Point 4s.

COMPANY HIGHLIGHT

**COMMAND CONTROL AND
COMMUNICATIONS CORP. (4C)**
23670 Hawthorne Blvd.
Torrance, CA 90505
(213) 373-9651

Malcolm K. Beyer, Jr., President
Private Corporation
Total Employees: 250
Total Revenues, Fiscal Year End
8/31/80: \$15,000,000

PRINCIPAL BUSINESS Development of military command and control systems since incorporation in 1972 in California.

FINANCIALS

	8/80	8/79
- Total Revenues (\$ Thousands)	\$15,000	\$11,000

SOURCES OF REVENUE

- 50% Professional services.
- 40% Turnkey systems.
- 5% Software products.
- 5% Hardware manufacture (peripherals).

PRODUCTS AND SERVICES

- Professional service contracts include the design and development of hardware and software for military command, control, communications and intelligence systems.
 - Areas of specialization include systems design/integration of Data General, Rolm and Point 4 equipment. 4C also has expertise in:
 - Data link modems.
 - Test beds.
 - Stimulation systems.
 - Simulation, data analysis and test.
 - Intelligence.
- Turnkey Systems (Exhibit A).
- Software Products (Exhibit A).

EXHIBIT A

PRODUCTS

COMMAND, CONTROL AND COMMUNICATIONS CORP.

PRODUCT	DESCRIPTION	PRICE	NUMBER INSTALLED	CPU REQUIREMENTS (OPERATING SYSTEM)
TURNKEY SYSTEM — SIMTRACC	SIMULATOR; TRAINER; COMMAND AND CONTROL SYSTEM	\$200,000-\$1 MILLION	25	DATA GENERAL NOVA AND ECLIPSE; POINT 4 SYSTEM
SOFTWARE PRODUCTS — CMS-2Z COMPILER	FOR ROLM AND DATA GENERAL MINICOM- PUTERS	\$50,000+	5	DATA GENERAL NOVA AND ECLIPSE; ROLM 1602 AND 1603; IBM 370
— COSMOS	FOR SOFTWARE CON- FIGURATION MANAGEMENT	NOT YET DETER- MINED	TEST IN- STALLA- TIONS	DATA GENERAL NOVA AND ECLIPSE

INDUSTRY MARKETS

-	U.S. Government	70%
-	Commercial military industry (ex. Rockwell International, Raytheon)	30
		<hr/>
		100%

GEOGRAPHIC MARKETS

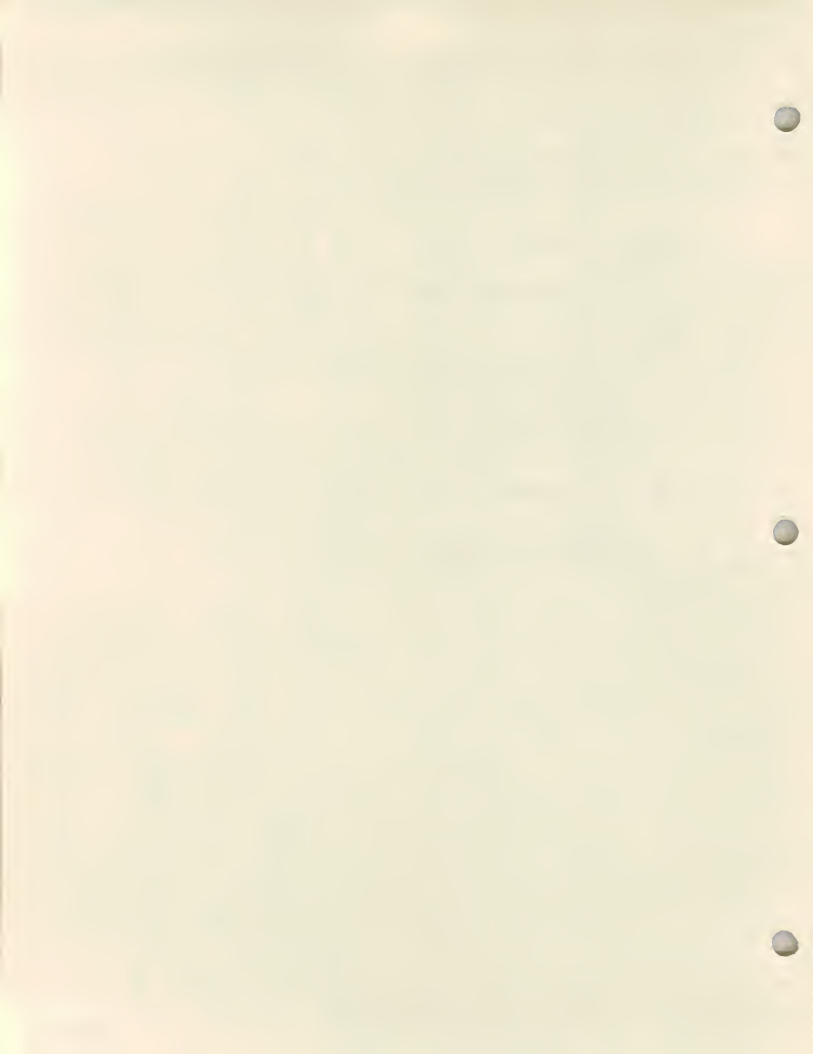
-	U.S.	75%
-	International (Germany, Taiwan)	<u>25</u>
		100%

OFFICE LOCATIONS

- Torrance, CA (Headquarters).
- San Diego, CA.
- Huntsville, AL.
- Fort Monmouth, NJ.
- Langley Air Force Base.
- El Paso, TX.

COMPUTER HARDWARE

- 1 Data General S/250.
- 6 Data General C/150s.
- 12 Point 4 Data Corp. Point 4s.



**COMMUNICATIONS SOFTWARE,
INC.**

2388 Pleasantdale Road
Atlanta, GA 30340
Phone: (404) 448-5259
Fax: (404) 448-3350

President:	Mickey Benam
Status:	Private Company
Total Employees:	11
Total Revenue:	\$1-\$2 million*
Fiscal Year End:	12/31/92

*INPUT estimate

Key Points

- Communications Software, Inc. (CSI) continues to focus on the fast growing personal communications industry.
- Recently, CSI has taken steps to target the global market, with two installations in Europe. It is anticipated that revenue from international sources will grow to 20% to 25% of total revenue over the next three years.
- Several new applications that have been introduced in the past year include Equipment History, Reseller Access, and Enhanced Terminal Interfacing.
- CSI recently gained a major new client--Bell Atlantic Paging.

Company Description

CSI, founded in 1983, provides turnkey systems and professional services for billing and inventory control to companies providing personal communications services (paging, mobile telephones, cellular, answering services, and voice mail).

Strategy

CSI's strategy is to provide billing and reporting solutions exclusively for the personal communications industry.

The company's strategy for growth includes global expansion and the development of new applications within the personal communications industry.

The company is expanding its marketing efforts to European companies.

Financials

CSI's annual revenue has ranged between \$1 million and \$2 million over the past several years.

The company has gained new clients each year, but has also lost installations due to consolidation in the personal communications industry.

Alliances

CSI is an Industry Remarketer for IBM and a DEC OEM.

CSI also sell financial applications software packages from Kennedy Systems with CSI turnkey systems.

CSI's Info-Pro report writer software is based on the IQ report writer from IQ Software, Inc.

Key Products and Services

Approximately 70% of CSI's revenue is derived from turnkey systems, 20% from software support services, and 10% from custom programming professional services.

CSI offers turnkey systems to personal communications companies that specialize in paging, mobile telephone, telephone answering, and/or voice mail services.

- CSI's Pro-Management Solutions are targeted to specific communications service providers. Those companies that provide multiple personal communications services may select only the

packages necessary to support their billing and inventory control requirements. Systems available include the following:

- Pager-Pro, for paging services
 - Mobile-Pro, for mobile telephone services
 - Answer-Pro, for telephone answering services
 - Voice-Pro, for voice-mail services
 - Info-Pro, a report writer based on IQ software
- Applications supported include the following:
- Billing
 - Accounts Receivable
 - Inventory Control
 - Reporting
 - General Ledger
 - Accounts Payable
 - Lockbox Processing
 - Reseller Access
- The systems are available for IBM RS/6000; DEC Alpha, 486; and NCR computers. Operating systems supported include AIX, UNIX, XENIX, VMS, MS-DOS, and others.
- There are currently 40 systems installed.

Professional services provided by CSI include custom software development related to the company's turnkey systems, such as the development of interfaces for paging terminals, mobile switches, and telephone answering service devices. The company also provides training and installation support for its Pro-Management Solutions.

Industry Markets

One hundred percent of CSI's revenue is derived from personal communications services providers.

CSI has installed systems for companies with as few as 300 subscribers, as well as those with over 200,000.

Clients

Major clients include Bell Atlantic Paging, Pacific Telesis International, Metrocall, Arch Communications, and Crico Communications.

**Geographic
Markets**

Approximately 90% of CSI's total 1992 revenue was derived from the U.S. and 10% from international sources, including Canada and Europe.

CSI markets its products via its direct sales force.

CSI anticipates that international revenue will reach 20% to 25% of total revenue by 1995.

COMPANY PROFILE

COMMUNICATIONS SOFTWARE, INC.

2388 Pleasantdale Road
Atlanta, GA 30340
(404) 448-5259

Mickey Benamy, President
Private Company
Total Employees: 10
Total Revenue, Fiscal Year End
12/31/90: \$1,200,000*

*INPUT estimate

The Company

Communications Software, Inc., founded in 1983, provides turnkey systems and professional services for billing and inventory control to companies providing personal communications services (paging, mobile telephones, cellular, answering services, and voice mail).

Key Products and Services

Approximately 70% of Communications Software's revenue is derived from turnkey systems, 20% from software support services, and 10% from custom programming professional services.

Communications Software offers turnkey systems to radio common carrier (RCC) companies, mobile telephone companies, and telephone answering service companies.

- Applications supported include the following:
 - Inventory Control
 - General Ledger
 - Accounts Payable
 - Accounts Receivable
 - Payroll
 - Report Generation
 - Spreadsheet
- Communications Software offers four systems targeted to specific communications service providers. Those companies that provide multiple personal communications services may select only the packages necessary to support their billing and inventory control requirements. Systems available include the following:
 - Pager-Pro, for paging services
 - Mobile-Pro, for mobile telephone services
 - Answer-Pro, for telephone answering services
 - Voice-Pro, for voice-mail services

- The systems are available for DEC VAX, AT&T 3B2 and StarServer, and NCR microcomputers. Operating systems supported include UNIX, AIX, VMS, MS-DOS, and XENIX.
- There are currently 40 systems installed.

Professional services provided by Communications Software include custom software development related to the company's turnkey systems, such as the development of interfaces for paging terminals, mobile switches, and telephone answering service devices.

Industry Markets

One hundred percent of Communications Software's revenue is derived from personal communications services providers.

Geographic Markets

One hundred percent of Communications Software's revenue is derived from the U.S. and Canada.

COMPANY PROFILE

COMMUNICATIONS SOFTWARE, INC.

2388 Pleasantdale Road
Atlanta, GA 30340
(404) 448-5259

Mickey Benamy, President
Private Company
Total Employees: 10
Total Revenue, Fiscal Year End
12/31/88: \$700,000*

*INPUT estimate

The Company

Communications Software, Inc., founded in 1983, provides turnkey systems and professional services for billing and inventory control to companies providing personal communications services (paging, mobile telephones, cellular, answering services, and voice mail).

Key Products and Services

Approximately 70% of Communications Software's revenue is derived from turnkey systems, 20% from software support services, and 10% from custom programming professional services.

Communications Software offers turnkey systems to radio common carrier (RCC) companies, mobile telephone companies, and telephone answering service companies.

- Applications supported include the following:
 - Inventory Control
 - General Ledger
 - Accounts Payable
 - Accounts Receivable
 - Payroll
 - Report Generation
 - Spreadsheet
- Communications Software offers four systems targeted to specific communications service providers. Those companies that provide multiple personal communications services may select any one system to support all their billing and inventory control management requirements. Systems available include the following:
 - Pager-Pro, for paging services
 - Mobile-Pro, for mobile telephone services
 - Answer-Pro, for telephone answering services
 - Voice-Pro, for voice-mail services

- The systems are available for DEC MicroVAX, DEC VAX, AT&T 3B2, AT&T 6386, and NCR Tower computers. Pricing is available on request.
- There are currently approximately 35 systems installed.

Professional services provided by Communications Software include custom software development related to the company's turnkey systems, such as the development of interfaces for paging terminals, mobile switches, and telephone answering service devices.

Industry Markets

One hundred percent of Communications Software's revenue is derived from personal communications services providers.

Geographic Markets

One hundred percent of Communications Software's revenue is derived from the U.S. and Canada.

COMPANY BRIEF

Primary Industry-Specific Market: Telecommunications

Communications Software, Inc.

2388 Pleasantdale Road
Atlanta, GA 30340
(404) 448-5259

CEO: Mickey Benamy, President
Private Company
Founded: 1983

Employees: 7 (11/86)
Revenue (FYE 12/31/85): \$500,000*

The Company: Communications Software Inc. provides turnkey systems, application software, and professional services to companies providing voice communications services

Sources of Revenue:

- Turnkey Systems (85%)
- Application Software (10%)
- Professional Services (5%)

Key Products and Services:

- Turnkey Systems (Utilizes DEC MicroVAX and DEC VAX minicomputers)
 - The company's turnkey systems provide the following applications for radio common carrier (RCC) rental companies, mobile telephone rental companies, and telephone answering service companies:
 - Inventory control
 - General ledger
 - Accounts payable
 - Accounts receivable
 - Payroll
 - Report generator
 - Spreadsheet
- Application Software (Utilizes DEC MicroVAX and DEC VAX minicomputers)
 - Software sold as part of the turnkey systems described above is also available as application products for voice communication services companies
- Professional Services
 - These services include custom software development related to the company's other systems, such as the development of interfaces for paging terminals, mobile switches, and telephone answering service devices

*INPUT estimate

October 1986

Target Industries:

- Telecommunications (100%)

Geographic Markets:

- U.S. (100% in 1985)
- In 1986, began selling outside the U.S., including Canada and Puerto Rico
- Direct sales (100%)

October 1986

COMPANY PROFILE

COMNET CORPORATION
(formerly Computer Network Corporation)
5185 MacArthur Boulevard, N.W.
Washington, DC 20016-3387
(202) 537-2500

John Spohler, Chairman
Robert S. Bowen, President and CEO
Public Corporation, OTC
Total Employees: 337
Total Revenue, Fiscal Year End
3/31/86: \$37,202,792
Computer Services Revenue:
\$13,656,538

THE COMPANY

- COMNET Corporation was founded in 1967 as Computer Network Corporation to provide remote computing services. The company expanded its services in 1976 to include facilities management and, in mid-1981, began marketing proprietary application software. During fiscal 1985 COMNET began offering direct marketing computer services, laser printing, and customized forms design.
 - On August 28, 1985 the stockholders of Computer Network Corporation approved a change in the name of the company to COMNET Corporation. COMNET has been a registered trademark of the company and an abbreviation of the formal name.
 - Noncomputer services revenue is derived from the sale of vitamins, nutritional supplements, and over-the-counter pharmaceuticals by COMNET's wholly owned subsidiary, Ford Laboratories, Inc. which was acquired in September 1984.
- Total revenue in fiscal 1986 reached \$37.2 million, a 63% increase over fiscal 1985 revenue of \$22.8 million. Computer services revenue reached \$13.7 million, a 40% increase over fiscal 1985 computer services revenue of \$9.8 million. A five-year financial summary follows:

COMNET CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

FISCAL YEAR ITEM	3/86	3/85	3/84	3/83	3/82
Revenue					
• Computer services	\$ 13,657	\$ 9,783	\$ 14,220	\$ 14,483	\$ 12,812
• Ford Laboratories	<u>23,546</u>	<u>12,996</u>	<u>-</u>	<u>-</u>	<u>-</u>
	\$ 37,203	\$ 22,779	\$ 14,220	\$ 14,483	\$ 12,812
• Percent increase (decrease) from previous year	63%	60%	(2%)	13%	(50%)
Income (loss) before taxes	\$ (1,017)	\$ (1,201)	\$ (1,340)	\$ 618	\$ 1,081
• Percent change from previous year	15%	10%	(317%)	(43%)	69%
Net income (loss)	\$ (903)	\$ (453)	\$ (870)	\$ 377	\$ 517
• Percent change from previous year	(99%)	48%	(331%)	(27%)	602%
Earnings (loss) per share	\$ (0.39)	\$ (0.22)	\$ (0.46)	\$ 0.19	\$ 0.30
• Percent change from previous year	(77%)	52%	(342%)	(37%)	433%

- Revenue increases in the computer services segment were attributed to a 55% increase in software revenue, and a 26% increase in processing and facilities management revenue.
 - COMNET's various computer services activities generated income before taxes of \$305,536 during fiscal 1986, compared to a loss before taxes of approximately \$1.1 million during fiscal 1985. 1986 results include a write-off of goodwill of \$546,188 associated with the company's COM-MED Division which was formed in 1982 with the acquisition of Data Systems Consulting Corporation.
- Recent acquisitions made by COMNET include the following:
 - In July 1985 COMNET acquired all of the rights and assets relating to the Letter Writer Software System Technology of Andrew Bellinghieri Associates for 8,000 shares of COMNET common stock plus up to 8,000 additional shares based on future product sales.
 - The acquired product is marketed by COMNET's Group I Software Division under the name EZ-LETTER.

COMNET CORPORATION

- On January 1, 1985, COMNET acquired National Systems Laboratories, Inc. (NSL) of Naperville (IL) for 34,994 shares of COMNET common stock plus additional shares contingent on NSL's future sales during the 13-month period beginning January 1, 1985.
 - NSL marketed a list maintenance software product for IBM and compatible mainframes running under CICS.
 - Sales volume did not reach required levels; therefore, COMNET no longer has an obligation to the former shareholders of NSL.
- COMNET's computer services and products are provided through four operating divisions as follows:
 - The Computer Network Division provides remote computing and facilities management services to federal government and commercial clients.
 - The Group I Software Division provides mail management, postal discount, and direct marketing software products for IBM and compatible mainframes.
 - The COM-MED Division provides processing and consulting services to nursing homes in New York State.
 - The AIM Division, formed in late fiscal 1986, provides computer-based direct marketing, laser printing, and customized forms design for government and commercial clients.
- As of March 31, 1986, COMNET had 337 employees, of which 117 were involved in computer services activities. The company currently has a total of 360 employees, with 140 involved in computer services as follows:

Computer Network Division	67
Group I Software	37
COM-MED	8
AIM	<u>28</u>
	140

KEY PRODUCTS AND SERVICES

- COMNET's fiscal 1986 computer services revenue was approximately \$13.7 million. Approximately 54% of computer services revenue was derived from processing, facilities management, and associated support services. The remaining 46% was derived from mail management application software products.
- A three-year summary of source of computer services revenue by operating division follows:

COMNET CORPORATION

FISCAL YEAR ITEM	3/86		3/85		3/84	
	Revenue	Percent of Total	Revenue	Percent of Total	Revenue	Percent of Total
Computer Network Division	\$ 5.8	42%	\$4.5	46%	\$10.1	71%
Group I Software	6.3	46	4.0	41	3.1	22
COM-MED	0.8	6	1.1	11	1.0	7
AIM (a)	<u>0.8</u>	<u>6</u>	<u>0.2</u>	<u>2</u>	<u>-</u>	<u>-</u>
Total	\$ 13.7	100%	\$9.8	100%	\$14.2	100%

(a) Operations of this unit were previously included in the Computer Network Division. The AIM Division was formed in late fiscal 1986 and results have been reclassified accordingly.

- The Computer Network Division provides remote computing and facilities management services to federal government and commercial customers.
 - Agencies or departments of the federal government contributed 54% to the division's fiscal 1986 revenue, compared to 57% in fiscal 1985, and 90% in fiscal 1984.
 - The division expects that its revenue will continue to be derived, as it has in the past two years, from a balanced combination of federal government agencies and departments, and commercial clients.
 - In July 1985 COMNET announced it had been awarded a five-year \$24 million contract to provide remote computing services for the General Services Administration. This contract contributed 6% (\$2.2 million) to total fiscal 1986 revenue.
 - In March 1985 the division was awarded a facilities management contract by the International Monetary Fund.
 - During fiscal 1985 COMNET entered into a three-year contract to provide computer services to Rand Information Systems. As of March 31, 1986, COMNET owned 15.6% of Rand.
 - On October 30, 1985 Rand terminated the contract and filed suit against COMNET. A settlement was reached in February 1986 whereby Rand paid COMNET \$106,000 and issued a two-year promissory note for \$50,000.

- Sales to Rand were \$730,296 in fiscal 1986 and \$919,723 in fiscal 1985.
- The division has other contracts with the U.S. Department of Justice, the U.S. Department of Commerce, the Internal Revenue Service, the State Department, Action, the Peace Corps, the Organization of American States, and the Federal Trade Commission.
- A profile of COMNET's current network services offerings is outlined in the exhibit.
- COMNET has established a Customer Support Group, HELPER, to provide its users with technical assistance.
 - Users requiring assistance can contact HELPER by toll-free phone, low-speed terminal, walk-in visit, or by mail.
- The division has recently announced plans to offer professional services, including custom programming, systems analysis, and consulting.
- The Group I Software Division provides mail management, postal discount, and direct marketing software products for IBM and compatible mainframes. There are currently over 1,600 products installed.
 - Approximately 78% of the division's fiscal 1986 revenue was derived from software licenses and 22% from maintenance contracts.
 - Group I Software consists of a series of modules that can operate as standalone components or as an integrated mail management system. Current products available include the following:
 - List Management Systems.
 - List Conversion, priced at \$12,500 converts mailing lists from one format to another.
 - EZ-5 is a ZIP Code correction system that adds, corrects, or confirms five-digit ZIP Codes. It is priced at \$15,000.
 - EZ-6 is a Postal Code correction system that adds, corrects, or confirms six-character Canadian Postal Codes. It is priced at \$25,000.
 - Mailing Address Standardization System (MA\$\$) is a system for cleaning and standardizing address information according to U.S. Postal Service standards. It is priced at \$5,000.

EXHIBIT

COMNET
NETWORK PROFILE

APPLICATION AREA/ PRODUCT NAME	APPLICATION AREA/ PRODUCT NAME
<ul style="list-style-type: none">● OPERATING ENVIRONMENT<ul style="list-style-type: none">- IBM 370/158, MVS- NAS 8043● PROGRAMMING LANGUAGES<ul style="list-style-type: none">- FORTRAN- COBOL- PASCAL- BASIC- APL- PL/I● DATA MANAGEMENT SOFTWARE<ul style="list-style-type: none">- MODEL 204- INQUIRE- SYSTEM 2000- FOCUS- RAMIS● STATISTICS<ul style="list-style-type: none">- SPSS- SAS- TPL- ESP- BMD/BMDP- SOUPAC- TSP- SSP- MATLAN- DATATEXT	<ul style="list-style-type: none">● MATHEMATICS<ul style="list-style-type: none">- MPSX● RETRIEVAL AND REPORTING<ul style="list-style-type: none">- EASYTRIEVE● GRAPHICS<ul style="list-style-type: none">- SAS/GRAPH- PLOT 10● OTHER<ul style="list-style-type: none">- PLANCODE- SCRIPT- ATMS III- TAPS- PMS IV- GPSS- SPREAD

- Consumer Merge/Perge is a system for identifying or eliminating duplicates in a single file or across multiple files. It is priced at \$17,500.
- Generalized Selection performs targeted geographic selections, demographic analysis, match/merge functions or cleaning and reporting. It is priced at \$16,500.
- EZ-CITY is an on-line city/state verification system. It is priced at \$5,000.

Postal Discount Systems.

- Carrier Route Coding System (CRC\$) is a coding system for maximizing first, second, third, and fourth-class postal discounts. It is priced at \$10,000.
- EZ-9 is a ZIP+4 coding system that inserts or appends the correct four-digit add-on code. It is priced at \$10,000.
- Mail\$stream \$orting System (M\$\$\$) is a tool for maximizing Postal Service discounts on precoded first, second, third, and fourth-class mail. It is priced at \$16,500.
- MAIL-1 allows users who have EZ-5, EZ-9, Carrier Route Coding, and/or Mail Address \$tandardization to perform all or a combination of these functions in a single pass. It is priced at \$5,000.
- Palletization \$ystem (PAL\$) enables large volume mailers to use shipping pallets, reducing the labor required and risk of damage in the preparation of bulk mailings. It is priced at \$12,500.
- MAIL CANADA is a tool for sorting all classes of Canadian mail according to the delivery mode presort programs of Canada Post. It is priced at \$25,000.

Personalization Systems.

- Label Printing, priced at \$5,000, prints name and address mailing labels according to preset parameters.
- EZ-LIST, a list management product, is priced at \$15,000.
- EZ-LETTER is a system for producing personalized letters, forms, reports, etc., with outputs to laser, impact, and ink-jet printers. It is priced at \$25,000.

COMNET CORPORATION

- The division's clients include AT&T, Gulf Oil, Hartford Insurance, Reader's Digest, Time, Inc., Harte-Hanks, and Dun & Bradstreet.
- The COM-MED Division provides batch processing for financial management applications (through a third-party service bureau) and associated support services to over 40 nursing home clients located in New York State.
 - During early 1985 COMNET announced plans to begin user testing on a newly developed patient care turnkey system. The system, based on DEC VAX and PDP-11 minicomputers, supports nursing home management and incorporates the recordkeeping required by new federal programs for cost reimbursement planned for implementation in 1986. The system is currently still under development. Availability is scheduled for early 1987.
- The AIM (Automated Image Management) Division provides specialized direct marketing computer services, laser printing, and customized graphics, forms design, and digitization for commercial and government clients.
 - AIM implements Group I Software products to provide clients various mail management services.
 - The division is adding to its sales and operations staffs and management expects revenue from this unit will account for an increasing proportion of computer services-related revenue.
 - The AIM Division currently has over 200 clients.

INDUSTRY MARKETS

- Approximately 2% of COMNET's fiscal 1986 computer services revenue was derived from the federal government. The remaining 98% was derived from clients across industries, including banking and finance, insurance, telecommunications, mailing houses, publishing, health care, manufacturing, and political and fund-raising organizations.

GEOGRAPHIC MARKETS

- Approximately 95% of COMNET's fiscal 1986 computer services revenue was derived from the U.S. and 5% from international sources, including Canada.
- COMNET office locations are as follows:
 - The Computer Network Division is headquartered in Washington, D.C.
 - Group I Software, headquartered in Washington, D.C., has sales offices in Atlanta, Boston, Chicago, Dallas, Los Angeles, and New York City.
 - The COM-MED Division is headquartered in New York City (NY).
 - The AIM Division is headquartered in Herndon (VA).

COMPUTER HARDWARE AND SOFTWARE

- COMNET has the following mainframes installed:
 - Washington, D.C.
 - 1 IBM 3033.
 - 1 IBM 370/158, OS/MVS.
 - 1 NAS 8043.
 - Herndon (VA).
 - 1 IBM 4341.
- Clients access COMNET's network via direct-dial.



FINANCIAL UPDATE TO PROFILE DATED SEPTEMBER 1982*

COMNET CORPORATION
(formerly Computer Network Corporation)
5185 MacArthur Boulevard, N.W.
Washington, DC 20016-3387
(202) 537-2500

John Spohler, Chairman
Robert S. Bowen, President and CEO
Public Corporation, OTC
Total Employees: 300
Total Revenue, Fiscal Year End
3/31/85: \$22,779,055
Computer Services Revenue:
\$9,782,852

COMNET CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	3/85	3/84	3/83	3/82	3/81
Revenue	\$ 22,779	\$ 14,220	\$ 14,483	\$ 12,812	\$ 19,277
• Percent increase (decrease) from previous year	60%	(2%)	13%	(50%)	(9%)
Income (loss) before taxes	\$ (1,201)	\$ (1,340)	\$ 618	\$ 1,081	\$ (197)
• Percent change from previous year	10%	(317%)	(43%)	69%	(116%)
Net income (loss)	\$ (453)	\$ (870)	\$ 377	\$ 517	\$ (103)
• Percent change from previous year	48%	(331%)	(27%)	602%	(111%)
Earnings (loss) per share	\$ (0.22)	\$ (0.46)	\$ 0.19	\$ 0.30	\$ (0.09)
• Percent change from previous year	52%	(342%)	(37%)	433%	(116%)

- On August 28, 1985 the stockholders of Computer Network Corporation approved a change in the name of the company to COMNET Corporation. COMNET has been a registered trademark of the company and an abbreviation of the formal name.

*Replaces Financial Update of August 1983

- Recent acquisitions made by COMNET include the following:
 - Effective September 1, 1984, COMNET acquired all the outstanding shares of Ford Laboratories, Inc., a manufacturer and marketer of vitamins and nutritional supplements, for \$1.5 million in cash, \$6.5 million in bank notes payable, \$3.4 million in subordinated notes payable to the seller, and 500,000 warrants to purchase COMNET common stock at \$5 per share. All 500,000 warrants were exercised on December 20, 1984 at an aggregate price equal to \$2 million of the subordinated notes payable plus accrued interest.
 - The acquisition was accounted for as a purchase and the results of Ford Laboratories are included in the financial statements as of September 1, 1984.
 - Ford Laboratories contributed nearly \$13 million to COMNET's fiscal 1985 revenue and \$571,143 to income before taxes.
 - On January 1, 1985, COMNET acquired National Systems Laboratories, Inc. (NSL) of Naperville (IL) for 34,994 shares of COMNET common stock plus additional shares contingent on NSL's future sales.
 - NSL markets a list maintenance software product for IBM and compatible mainframes running under CICS.

SOURCE OF REVENUE

- Revenue from computer services was approximately \$9.8 million in fiscal 1985, \$14.2 million in fiscal 1984, and \$14.5 million in fiscal 1983. COMNET management attributes the revenue decreases to the decline in services provided to the federal government, specifically activities related to the Department of Education and the Department of the Navy contracts which terminated in fiscal 1984. These contracts accounted for 42% of revenue in fiscal 1984 and none in fiscal 1985.
- INPUT estimates approximately 59% of COMNET's fiscal 1985 computer services revenue was derived from processing and associated support services and 41% from application software products.
- Computer services are provided through three operating divisions, as follows:
 - Computer Network Division (formerly the Information Systems Division) provides remote computing and facilities management processing services to federal government and commercial customers.
 - This division contributed approximately 48% (\$4.7 million) to fiscal 1985 computer services revenue, compared to 71% (\$10.1 million) in fiscal 1984.

COMNET CORPORATION

- Agencies or departments of the federal government contributed 57% to the division's fiscal 1985 revenue, compared to 90% in fiscal 1984, and 90% in fiscal 1983.
- In March 1985 the division was awarded a facilities management contract by the International Monetary Fund.
- In July 1985 COMNET announced it had been awarded a five-year \$24 million contract to provide remote computing services for the General Services Administration.
- In late fiscal 1985 this division began offering laser-imaged printing services.
- Group I Software (formerly the COM-MAIL Division) provides mail management and office automation application software products for IBM mainframes.
 - The division contributed an estimated \$4.1 million to fiscal 1985 revenue, compared to \$3.1 million in fiscal 1984.
- The COM-MED Division provides batch processing (through a third-party service bureau) and associated support services to over 40 nursing home clients located in New York State.
 - The division contributed an estimated \$1 million to fiscal 1985 revenue and \$1 million to fiscal 1984 revenue.
 - During early 1985 COMNET announced plans to begin user testing on a newly developed patient care turnkey system. The system, based on DEC VAX and PDP-11 minicomputers, supports nursing home management and incorporates the recordkeeping required by new federal programs for cost reimbursement planned for implementation in 1986. The system is scheduled for availability in January 1986.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program - U.S.

February 1996

Complete Business Solutions, Inc.

President & CEO: Raj Vattikuti
VP Business Development: Roy Ely
32605 West Twelve Mile Road
Suite 250
Farmington Hills, MI 48334
Phone: (810) 488-2088
Fax: (810) 488-2089



CBSI COMPLETE BUSINESS
SOLUTIONS, INC.
SYSTEMS INTEGRATION PARTNERS

Status:	Private
Employees:	1,500 (2/96)
Revenue:	\$68,000,000
Fiscal Year End:	12/31/95

Key Points

- Complete Business Solutions, Inc. (CBSI) is an international systems integration and professional services firm.
- To date, the company has performed more than 500 contracts for companies in the financial services, retail and distribution, government, utilities, transportation, hardware manufacturing, health care,

manufacturing/automotive and information technology industries.

- CBSI recently secured a 60 man-year contract with Chrysler for a Year 2000 conversion project.
- CBSI is facilitating a five-year, company-wide business process reengineering (BPR) effort for Spartan Stores to save it more than the \$20 million a year and make it more competitive in the marketplace.
- CBSI developed a client/server application (in three months) for S.W.I.F.T., an international communications firm, to

market to the financial and securities industries.

- CBSI has received other major contract awards from the State of Nevada, the State of Oregon and the State of Maryland.

Company Description

CBSI is an international computer consulting firm specializing in systems integration, strategic systems development, software application development, contract reprogramming and business process/system reengineering. The company also offers software products for the law enforcement and education marketplace.

CBSI was founded in 1985 by Raj Vattikuti, the company's president and chief executive officer.

Organization and Structure

Besides the chief executive, there are 90 managers who are responsible for overseeing all consulting assignments.

In early 1995, CBSI established different business units in order to better market its services.

- *Industry Business Units* include Automotive, Public Sector, Retail, Utilities, Banking, Insurance, Health Care and Telecommunications.
- *Geographic Business Units* include East, West, Central, Europe and India.
- *Project Partners* are vendors that provide subcontracts to CBSI and include IBM, Digital, Unisys, Tandem and EDS.
- *The CBSI Training Institute* offers continuing education for CBSI consultants and the public.

CBSI is headquartered in Farmington Hills (MI) and has additional U.S. offices in Cupertino and Oakland (CA) and Lombard (IL). Outside the U.S., CBSI has offices in London (U.K.) and Madras and Bangalore (India).

Company Strategy

CBSI's vision is to become the systems integration partner of choice worldwide. The company plans to meet the business needs of major corporations by providing specialized technology and industry expertise to solve complex systems integration and business problems.

CBSI's goal is to provide responsiveness, quality, cost-effectiveness and customer satisfaction.

- CBSI offers shared risk with customers on pilot projects to prove new technology concepts.
- The company cultivates and nurtures long-term customer relationships.
- CBSI has developed an aggressive customer response strategy similar to that of tactical SWAT teams. To solve immediate problems, CBSI's teams, composed of industry and technology specialists, are quickly deployed to the client's facility, while other CBSI experts plan long-term solutions.

Within its industry focus, CBSI has generated a successful track record in the areas of banking, education, health care, manufacturing, public sector, retail, utilities and transportation.

Financials

CBSI's 1995 revenue was approximately \$68 million. The company projects 1996 revenue will reach \$100 million. A five-year revenue summary is shown on the following page.

Complete Business Solutions, Inc.
Five-Year Revenue Summary
(\$ Millions)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	\$68.0	\$57.0	\$45.0	\$33.0	\$24.0
• Percent change from previous year	19%	27%	36%	43%	21%

CBSI management attributes revenue growth to new projects in client/server migration, legacy systems maintenance and object-oriented development.

CBSI has achieved a compound growth rate of 73% since 1986 and has operated profitably since its inception.

Revenue Analysis by Product / Service

Approximately 50% of CBSI's revenue is derived from professional services, 44% from systems integration services and 6% from software products.

Market Financials

CBSI derives revenue primarily from the automotive, public sector, retail, utilities, banking, insurance, health care and telecommunications industries.

CBSI's 1995 source of revenue was approximately as follows:

Public sector (government)	34%
Geographic regions	28%
Partners	24%
Retail and distribution	5%
Software products	6%
Utilities	2%
Other	<u>1%</u>
	100%

Revenue from geographic regions and partners comes from clients in the targeted industries previously described.

Geographic Markets

Approximately 90% of CBSI's revenue is derived from the U.S. and 10% from international sources.

Acquisitions

During 1994, CBSI acquired a 100% equity in CBS(India) of Madras (India).

- CBS(India) was formed as an alliance in 1991 to provide professional and systems integration services in India and to support CBSI's contract programming operations.
- CBS(India) has approximately 500 employees and recently achieved ISO 9001 certification.

Employees

CBSI has approximately 1,500 employees worldwide, segmented as follows:

Programming	85%
Marketing and sales	9%
General and administrative	<u>6%</u>
	100%

Many of CBSI's technical staff have advanced degrees.

All new employees receive orientation to prepare them for working at customer sites. New college hires also receive intensive technical and business communications training to enhance their marketability.

Key Products and Services

As a systems integration and professional services firm, CBSI has capabilities in the following areas:

- Downsizing
- Database design
- Custom software development
- Code reengineering
- Software reengineering
- Code/data conversion
- Porting and migrations
- MIS business planning
- Requirements analysis
- Business process reengineering
- Networking and communications
- Systems modeling and integration
- Training and education
- Applications development
- Hardware capacity planning
- On-site/off-shore development

The company has expertise in the following technologies:

- Client/server migrations
- Legacy systems maintenance
- Object-oriented development
- Year 2000 conversion strategies
- Fourth-generation languages
- Imaging
- CASE tools
- Networking
- Multimedia
- Voice response

Contract examples include the following:

- Building child support systems for the states of Indiana, Nevada, West Virginia, Oregon, Georgia, Idaho, Hawaii, Illinois, North Carolina and Nebraska in response to a federal mandate that requires all states have a fully automated child support system
- Initial and continued involvement in the BPR project at Spartan Stores, Inc. (Grand Rapids, MI)
- Migrating legacy systems to client/server for Chrysler, Suburban Communications and FRITZ
- Developing a strategic marketing intelligence system for Consumers Power Co.
- Developing an automated student registration system for Ford Motor Company
- Working on a major electronic data interchange (EDI) project for the Handleman Company
- Network design and implementation services for S.W.I.F.T.
- Implementing a field sales access system for The Gap

Software products offered by CBSI include the following:

- Multiple or Single Agency Information Center (MOSAIC) is a law enforcement system providing investigative tools for field investigative operations, supervisory control unit management and administrative requirements.

CBSI has performed more than 500 contracts. A partial list of clients is shown below.

Complete Business Solutions, Inc. Partial Client List

Banking & Finance Ameribanc American International Group Bank of America Citicorp First National Bank of Chicago Florida Federal The World Bank Wells Fargo S.W.I.F.T. Chelsea Building Society Dunfermline Building Society Charles Schwab	Public Sector (Government) State of Illinois State of Kansas State of Kentucky State of Maryland State of Michigan State of Nevada State of New Mexico State of Ohio State of Rhode Island State of West Virginia County of Oakland (MI) County of Suffolk (NY) City of Canton (OH) City of Miami (FL)	Utilities and Transportation American President Lines Michigan Consolidated Gas Co. Union Pacific Transportation Consolidated Edison Consumer's Power Virginia Power Pennsylvania Power and Light Great Lakes Gas Company Southern California Edison Pacific Gas and Electric Madison Electric and Gas
Retail and Distribution Spartan Stores Mexx, Europe The Gap, Inc. G.I. Joe Kroger New Balance Athletic Shoes Sears Handleman Company	Telecommunications AT&T BNR British Telecom GTE MCI Motorola	Health Care Services Children's Hospital (Detroit) St. Joseph's Hospital (Denver) Mercy Hospital (Detroit) Unisys HCS (Charlotte, NC)
		Manufacturing/Automotive Ford Motor Company Caterpillar, Inc. Motorola, Inc. Chrysler Corporation Johnson Controls, Inc. U.S. Steel BASF Inmont McDonnell Douglas

Marketing and Sales

CBSI markets its services through a direct sales force and through contracts with project partners.

Alliances

The following organizations are either business partners with CBSI or have worked with CBSI on a partnership basis:

- *Project Partners*—IBM, Digital, Unisys, Tandem, EDS
- *Hardware*—IBM, Unisys, Tandem, Hewlett-Packard, AT&T, Lexmark
- *Systems Integration*—Unisys, IBM ISSC, IBM, Network Solutions Inc., EDS, SHL Systemhouse, Andersen Consulting, American Management Systems
- *Software Reengineering*—SEEC
- *Client / Server*—Gupta, Oracle, Informix, Sybase, Microsoft
- *CASE Tools*—KnowledgeWare, Texas Instruments

Competition

CBSI's primary competitor in the Detroit area is Compuware.

Other competitors include EDS, IBM, Syntel and CDI.

Assessment

CBSI's strengths include:

- Quality technical expertise
- Competitive pricing
- Ability to deploy a team of people with specific skills in a short time frame to fulfill product requirements
- Strong emphasis in employee training/development
- Offshore capabilities

Challenges over the coming year include:

- Managing growth effectively
- Expanding further into the international marketplace

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1995

Complete Business Solutions, Inc.

President & CEO: Raj Vattikuti
32605 West Twelve Mile Road
Suite 250
Farmington Hills, MI 48334
Phone: (810) 488-2088
Fax: (810) 488-2089



CBSI COMPLETE BUSINESS SOLUTIONS, INC.
SYSTEMS INTEGRATION PARTNERS

Status: Private
Employees: 1,200 (3/95)
Revenue: \$57,000,000
Fiscal Year End: 12/31/94

Key Points

- Complete Business Solutions, Inc. (CBSI) is an international systems integration and professional services firm.
- CBSI has grown at a compound growth rate of 73% since its inception.
- To date, the company has performed more than 500 contracts for companies in the financial services, retail and distribution, government, utilities, transportation, hardware manufacturing, health

care, manufacturing/automotive and information technology industries.

- During 1994, CBSI secured a 60 man-year contract with Chrysler.
- During 1994, CBSI received other major contract awards from the State of Nevada, the State of Oregon, S.W.I.F.T. and Spartan Stores.

Company Description

CBSI is an international computer consulting firm specializing in systems integration, strategic systems development, software application development, contract programming and business process/system re-engineering. The company also offers two software products for law enforcement applications.

CBSI was founded in 1985 by Raj Vattikuti, the company's president and chief executive officer.

Organization and Structure

CBSI has a flat organizational structure. Besides the chief executive, there are 90 managers with the responsibility of overseeing all consulting and software development and supervising staff of specific products and industries.

In early 1995, CBSI established 17 business units in order to better market its services.

- *Industry Business Units* include Automotive, Public Sector, Retail, Utilities, Banking, Health Care and Telecommunications.
- *Geographic Business Units* include East, West, Central, Europe and India.
- *The Technical Resource Center* supports CBSI's contract programming activities out of the Dearborn (MI) office.
- *Project Partners* are vendors that provide subcontracts to CBSI and include IBM, DEC and Unisys.

CBSI is headquartered in Farmington Hills (MI) and has additional U.S. offices in Dearborn (MI); Cupertino, Oakland and Costa Mesa (CA), Boston (MA), Lombard (IL), Rockville (MD) and Bridgewater (NJ).

Outside the U.S., CBSI has offices in London (U.K.) and Madras and Bangalore (India).

Company Strategy

CBSI's vision is to become the systems integration partner of choice worldwide. The company plans to meet the business needs of major corporations by providing specialized technology and industry expertise to solve complex systems integration and business problems.

CBSI's goal is to provide responsiveness, quality, cost-effectiveness and customer satisfaction.

- CBSI offers shared risk with customers on pilot projects to prove new technology concepts.
- The company cultivates and nurtures long-term customer relationships.
- CBSI has developed an aggressive customer response strategy similar to that of tactical SWAT teams. To solve immediate problems, CBSI's SWAT teams, composed of industry and technology specialists, are quickly deployed to the client's facility, while other CBSI experts, both on and off the client's site, plan long-term solutions.

Within its industry focus, CBSI has generated a successful track record in the areas of banking, education, health care, manufacturing, public sector, retail, utilities and transportation.

Financials

CBSI's 1994 revenue reached approximately \$57 million, a 27% increase over 1993 revenue of \$45 million. A five-year revenue summary is shown on the following page.

CBSI management attributes revenue growth in 1994 to new projects in client/server migration, legacy systems maintenance and object-oriented development.

CBSI has achieved a compound growth rate of 73% since 1986 and has operated profitably since its inception.

**Complete Business Solutions, Inc.
Five-Year Revenue Summary
(\$ Millions)**

Item	Fiscal Year				
	1994	1993	1992	1991	1990
Revenue	\$57.0	\$45.0	\$33.0	\$24.0	\$19.0
• Percent change from previous year	27%	36%	43%	21%	1%

CBSI management anticipates that 1995 revenue will reach \$75 million, with projected revenues over \$100 million by 1997.

Revenue Analysis by Product/Service

Approximately 50% of CBSI's 1994 revenue was derived from professional services, 44% from systems integration services and 6% from software products.

Market Financials

CBSI derives revenue primarily from the automotive, public sector, retail, utilities, banking, health care and telecommunications industries.

CBSI's 1994 source of revenue was approximately as follows:

Public sector (government).....	34%
Geographic regions	28%
Partners	24%
Retail and distribution.....	5%
Software products	6%
Utilities.....	2%
Other	1%
	100%

Revenue from geographic regions and partners comes from clients in the targeted industries previously described.

Geographic Markets

Approximately 90% of CBSI's revenue is derived from the U.S. and 10% from international sources.

Acquisitions

During 1994, CBSI acquired a 100% equity in Total Business Solutions, Inc. (TBS) of Madras (India).

- TBS was formed as an alliance in 1991 to provide professional and systems integration services in India and to support CBSI's U.S. contract programming operations.
- TBS now operates as CBS India (Pvt.) Ltd., a wholly owned subsidiary of CBSI, with approximately 350 employees.

Employees

CBSI has approximately 1,200 employees worldwide.

CBSI added approximately 250 employees during 1994, bringing the total number of full-time U.S. employees to approximately 830. These U.S. employees are segmented approximately as follows:

Marketing and sales	20
Programming.....	760
General and administrative	50
	830

Approximately 70% of CBSI's technical staff have advanced degrees.

All new employees receive orientation to prepare them for working at customer sites. New college hires also receive intensive technical and business

communications training to enhance their marketability.

Key Products and Services

As a systems integration and professional services firm, CBSI has capabilities in the following areas:

- Downsizing
- Database design
- Code re-engineering
- System re-engineering
- Code/data conversion
- Porting and migrations
- MIS business planning
- Requirements analysis
- Training and education
- Applications development
- Hardware capacity planning
- Time and materials/fixed-pricing
- Custom software development
- On-site/off-shore development
- Business process re-engineering
- Networking and communications
- Systems modeling and integration

The company has expertise in the following technologies:

- Client/server migrations
- Legacy systems maintenance
- Object-oriented development
- Fourth-generation languages
- Imaging
- CASE tools
- Client/server
- Conversions
- Networking
- Multimedia
- Voice response

Contract examples include the following:

- Building child support systems for the states of Indiana, Nevada, West Virginia, Oregon, Georgia,

Idaho, Hawaii, Illinois, North Carolina and Nebraska in response to a federal mandate that requires all states have a fully automated child support system in place by October 1, 1995

- Revamping the computer systems at Spartan Stores, Inc. (Grand Rapids, MI)
- Developing an interactive multimedia technology system to train bank tellers for Bank One
- Migrating legacy systems to client/server for Chrysler, Suburban Communications and FRITZ
- Developing a strategic marketing intelligence system for Consumers Power Co.
- Developing an automated student registration system for Ford Motor Company
- Enhancing network capabilities and imaging services for the State of Michigan
- Network design and implementation services for S.W.I.F.T.
- Implementing a field sales access system for The Gap

Software products offered by CBSI include the following:

- Multiple or Single Agency Information Center (MOSAIC), a law enforcement system that provides investigative tools to address field investigative operations, supervisory control unit management and command and administrative requirements
- A message switching system (Dataplex) for police departments

Clients

CBSI has performed more than 500 contracts. A partial list of clients is shown in Exhibit A.

Exhibit A
Complete Business Solutions, Inc.
Partial Client List

Banking, Finance & Insurance Ameribanc American International Group Bank of America Citicorp First National Bank of Chicago Florida Federal The World Bank Wells Fargo S.W.I.F.T. Chelsea Building Society Dunfermline Building Society Great Republic Insurance	Public Sector (Government) State of Illinois State of Kansas State of Kentucky State of Michigan State of Nevada State of New Mexico State of Ohio State of Rhode Island State of West Virginia County of Oakland (MI) County of Suffolk (NY) City of Canton (OH) City of Detroit (MI)	Utilities and Transportation American President Lines Michigan Consolidated Gas Co. Union Pacific Transportation Consolidated Edison Consumer's Power Virginia Power Pennsylvania Power and Light Great Lakes Gas Company Southern California Edison Pacific Gas and Electric Madison Electric and Gas
Retail and Distribution Spartan Stores Mexx, Europe The Gap, Inc. G.I. Joe Kroger New Balance Athletic Shoes Sears Steelcase	Hardware Manufacturing IBM Unisys DEC Tandem AT&T GIS (NCR) Information Technology Andersen Consulting Electronic Data Systems IBM ISSC The Newtrend Group	Health Care Services Children's Hospital (Denver) St. Joseph's Hospital (Denver) Mercy Hospital (Detroit) Unisys HCS (Charlotte, NC) MEDSTAT Group (Ann Arbor, MI) Manufacturing/Automotive Ford Motor Company Caterpillar, Inc. Motorola, Inc. Chrysler Corporation U.S. Steel BASF Inmont McDonnell Douglas

Marketing and Sales

CBSI markets its services through a direct sales force of approximately 20 persons and through contracts with project partners.

Alliances

The following organizations are either business partners with CBSI or have worked with CBSI on a partnership basis:

- *Project Partners*—IBM, DEC, Unisys
- *Hardware*—IBM (CBSI Business Partner), Unisys (CBSI Business Partner), Tandem, Hewlett-Packard
- *Systems Integration*—Unisys, IBM ISSC, IBM, Network Solutions Inc., Electronic Data Systems, SHL Systemhouse
- *Software Re-engineering*—SEEC
- *Client/Server*—Gupta
- *CASE Tools*—KnowledgeWare, Texas Instruments
- *Other*—Informix, Oracle, Lexmark, Microsoft

Competition

CBSI's primary competitor in the Detroit area is Compuware.

Other competitors include EDS, IBM, Syntel and CDI

Assessment

CBSI's strengths include:

- Strong emphasis in employee training/development
- SWAT team concept to quickly assemble a group of workers to tackle a company's problem and solve it quickly. CBSI team members with expertise in the client's industry can pass along information to new hires working on the project.

- Quality technical expertise
- Effective use of quality, lower overhead contract programming staff located in India

Challenges over the coming year include:

- Managing growth effectively
- Expanding further into the international marketplace

COMPANY PROFILE

COMP-U-CHECK, INC.

24901 Northwestern Highway
7th Floor
Southfield, MI 48075
(313) 827-4300

Joseph A. Sullivan, Chairman and CEO
Martin R. Durbec, President and COO
Subsidiary of OTF Equities, Inc.
Total Employees: 76 (Full-time)
Total Revenue, Fiscal Year End
11/30/90: \$7,251,089

The Company

Comp-U-Check, Inc. provides various processing services to retailers and financial institutions, including check guarantee, verification, and collection services.

- The company previously provided private label credit card (PLCC) services to retailers, including servicing accounts and financing credit balances. Comp-U-Check has now withdrawn from the funded PLCC industry and has retained certain service-only clients.

Comp-U-Check's fiscal 1990 revenue was \$7.2 million, a 6% decrease from fiscal 1989 revenue of \$7.7 million. Net losses were \$413,000, compared to nearly \$1.9 million in fiscal 1989. A five-year financial summary follows:

**COMP-U-CHECK, INC.
FIVE-YEAR FINANCIAL SUMMARY**
(\$ thousands, except per share data)

ITEM	FISCAL YEAR				
	11/90	11/89	11/88	11/87	11/86
Revenue	\$7,251	\$7,749	\$8,738	\$7,989	\$7,120
• Percent change from previous year	(6%)	(11%)	(6%)	(11%)	9%
Income (loss) before taxes	\$(413)	\$(1,987)	\$(536)	\$(1,735)	\$348
• Percent change from previous year	79%	(271%)	69%	(599%)	(37%)
Net income (loss)	\$(413)	\$(1,894)	\$(390)	\$(1,211)	\$233
• Percent change from previous year	78%	(386%)	68%	(629%)	(32%)
Earnings (loss) per share	\$(0.30)	\$1.45	\$(0.30)	\$(0.91)	\$0.17
• Percent change from previous year	79%	(383%)	68%	(635%)	(35%)

Comp-U-Check management attributes fiscal 1990 results to the following:

- Check guarantee revenues increased slightly during the year. The total dollar value of checks guaranteed dropped nearly 21%, from 1989 to 1990, but this drop was offset by an increase in the average billing rate.
- PLCC business declined 94% due to the company's decision to terminate its funded PLCC business.

Revenue for the six months ending May 31, 1991 was \$3.7 million, a 3% increase over \$3.6 million for the same period in 1990. Net losses were \$346,886, compared to \$83,050 for the same period a year ago.

As of February 1991, Comp-U-Check had 76 full-time and 32 part-time employees.

Major competitors include Telecredit, TeleCheck Services, and JBS Associates.

Key Products and Services

Approximately 91% of Comp-U-Check's fiscal 1990 revenue was derived from its various check guarantee, check verification, and credit card processing services. Eight percent of revenue was derived from collection agency services and 1% from other sources.

A three-year summary of source of revenue follows:

**COMP-U-CHECK, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR					
	11/90		11/89		11/88	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Check guarantee	\$6,389	88%	\$6,358	82%	\$5,798	66%
Check verification	191	2%	205	3%	256	3%
Credit card services	41	1%	646	8%	1,885	22%
Collection services	569	8%	461	6%	663	8%
Other	63	1%	79	1%	136	1%
TOTAL	\$7,251	100%	\$7,749	100%	\$8,738	100%

Comp-U-Check's check guarantee service is provided to retail merchants throughout the U.S. under the name Sure-Check™.

- Comp-U-Check maintains a data base of information concerning dishonored checks, checks written with insufficient funds, and stolen or counterfeit checks. Subscribers to the service and other sources (including law enforcement agencies and business and retail associations) voluntarily provide this information to Comp-U-Check on a continuing basis.
- Access to Comp-U-Check's data center is available via customer computers, point-of-sale terminals, or telephone.
- If a guaranteed check is subsequently dishonored, Comp-U-Check must reimburse the subscriber for the face amount of the dishonored check.
- Charges for the service are based on a percentage of the total face amount of checks guaranteed.

- As of February 1991, Comp-U-Check had approximately 3,500 check guarantee service subscriber locations.
- During fiscal 1990, Highland Superstores, Inc. accounted for approximately 42% of Comp-U-Check's gross revenues and approximately \$237 million in checks guaranteed.

Comp-U-Check's check verification service for retailers is marketed under the name Take-A-Check™. FORBANK is a similar service available to financial institutions in the Detroit area.

- Comp-U-Check furnishes check verification subscribers with information in a coded form via printed directories, operator-assisted phone calls, computer tapes, direct computer-to-computer communication, point-of-sale terminals, and touch-tone audio response units.
- Comp-U-Check charges a monthly fee in connection with directory or computer tape information, and a charge-per-call for the other forms of delivery.
- A verification service subscriber who obtains information from Comp-U-Check must decide whether or not to accept the check. Comp-U-Check does not guarantee against losses under this service.
- As of February 1991, Comp-U-Check had approximately 200 Take-A-Check subscriber locations and 600 FORBANK subscriber locations.

Comp-U-Check provides collection agency services through its Comp-U-Check Collections Inc. subsidiary.

- Comp-U-Check Collections collects checks and accounts receivable for others on a contingent fee basis, collects checks purchased by Comp-U-Check through its Sure-Check service, and markets collection letters and skip tracing services.
- Services are provided to various businesses, including medical facilities, educational institutions, financial institutions, and retailers.
- As of February 1991, Comp-U-Check was providing collection services to approximately 100 clients.

Industry Markets

The majority of Comp-U-Check's revenue is derived from retailers. The remainder is derived from the banking and finance and other industries.

Customers include various retailers, financial institutions, hospitals, supermarkets, utilities, hotels, and automobile dealers.

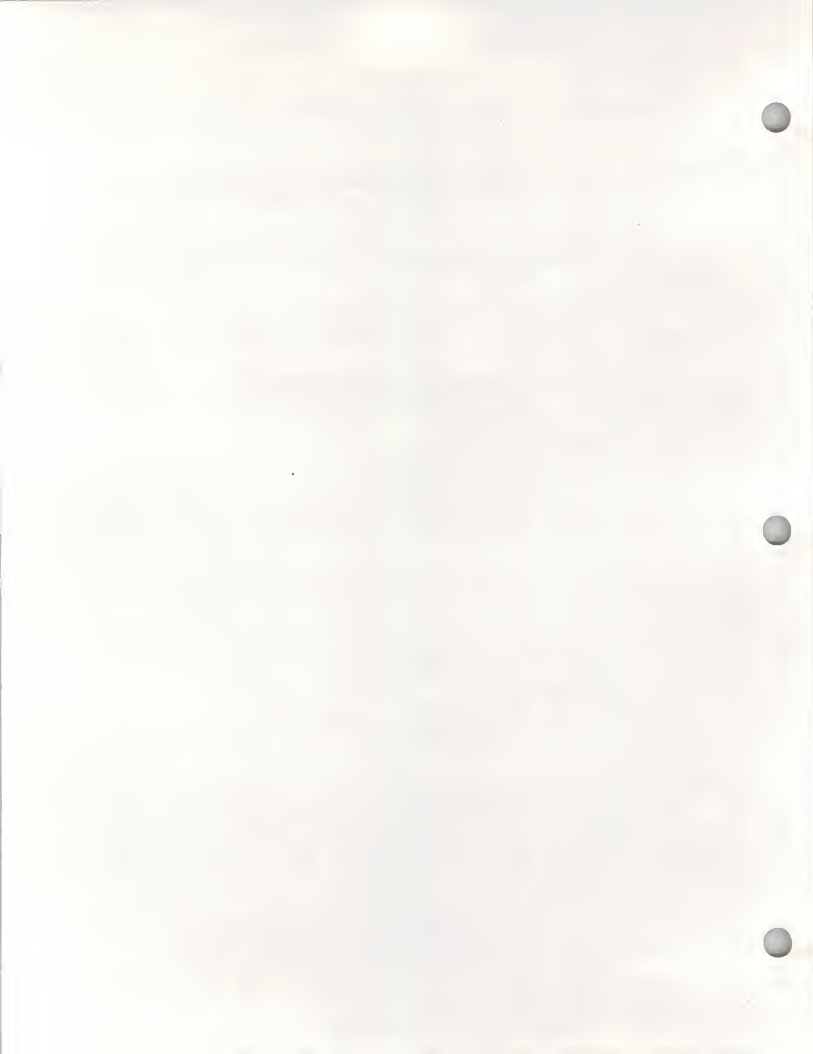
Geographic Markets

One hundred percent of Comp-U-Check's revenue is derived from the U.S.

Computer Hardware

Comp-U-Check owns two IBM 4341 computers, which are installed in Southfield.

Clients of Comp-U-Check's check guarantee and check verification services may access the Comp-U-Check data center 24 hours a day, seven days a week.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1996

Compression Labs, Incorporated

Chairman: Dr. Arthur G. Anderson
President & CEO: T. Gary Trimm
2860 Junction Avenue
San Jose, CA 95134
Phone: (408) 435-3000
Fax: (408) 922-5429

Status:	Public
Employees:	539 (3/96)
Revenue:	\$112,979,000
Fiscal Year End:	12/31/95

Key Points

- Compression Labs, Incorporated (CLI) provides desktop and group videoconferencing solutions for business, government, education, and health care organizations.
- In late 1995, CLI discontinued the operations of its Broadcast Division due to significant competition from larger companies with end-to-end product lines and extensive worldwide sales. The company recorded a charge against 1995 results from discontinued operations of

\$36.5 million. CLI is actively seeking alternatives for this business, either through its sale, partnership, or other agreement.

- In March 1996, CLI announced a major restructuring designed to simplify and reduce the size of the company, streamline processes, reduce expenses and product costs, and match its product offerings more closely to customer needs and market directions. The restructuring resulted in a reduction in the work force of approximately 90 employees and restructuring charges of \$11 million in the fourth quarter of 1995 and \$1.7 million in the first quarter of 1996.
- As part of the company's strategy to offer and integrate a range of video communications solutions to solve

enterprise-wide business needs, CLI has introduced the CLI Desktop Video family.

- In February 1996, CLI announced the resignation of its chairman, president, and CEO, John E. Tyson. Gary Trimm, senior vice president, has been appointed president and CEO and Dr. Arthur G. Anderson, a director of CLI, was appointed chairman of the board.

Company Description

CLI, founded in 1976, develops, manufactures, and markets visual communication systems based on compressed digital video (CDV) technology.

- The company's systems use proprietary and industry-standard algorithms to compress the amount of data required to transmit digital video and audio signals, thereby significantly reducing the cost of transmitting these signals over terrestrial, microwave, cable, or satellite networks.
- CLI has sales offices across the U.S., with international offices in Asia and Europe, and distributors serving more than 50 countries worldwide.

In November 1995, CLI adopted a strategic plan to discontinue the operation of its Broadcast Division. This unit manufactures and sells broadcast video products to commercial users.

- Revenue from this division was approximately \$37 million, \$42 million, and \$46.2 million in 1995, 1994, and 1993, respectively.
- Discontinuing these operations was intended to help the company focus on providing television-quality videoconferencing products, especially at higher bandwidths.

- CLI has announced that it is in negotiations with an interested party regarding the potential sale of assets of this division.

Organization and Structure

In the first quarter of 1996, CLI decided to restructure the Videoconferencing Division in order to seek profitability and growth, resulting in the layoff of 90 employees and closing of several offices.

CLI is headquartered in San Jose (CA). Current North American sales offices are in Atlanta (GA), Itasca (IL), New York (NY), and Reston (VA).

Outside the U.S., CLI has sales offices in Beijing (China) and Belgium.

CLI's key executives are listed below.

CLI Key Executives

Name	Title
T. Gary Trimm	President and CEO
William A. Berry	CFO and SVP
Dr. Wen Chen	SVP Research and Chief Scientist
Ted S. Augustine	VP Sales, Videoconferencing Products
Anthony Pilarinos	VP Engineering, Videoconferencing Products
Steven E. Richardson	VP Marketing, Videoconferencing Products
Paul P. Romeo	VP Operations, Videoconferencing Products
James D. Lakin	VP, Sales and Marketing Broadcast Products

Company Strategy

CLI's strategy is to strengthen its position as a leading supplier of a range of "premium quality" group and desktop videoconferencing systems.

The company's strategy includes the following key elements:

- *Technology leadership*—CLI has pioneered video compression technology and continues to develop videoconferencing systems with enhanced picture and audio quality and features at lower costs.
- *Range of videoconferencing products*—CLI claims to have one of the broadest product lines in the videoconferencing industry, spanning a range of market applications and operating at transmission rates from 56 kbps to 2.048 mbps. CLI believes that supplying a range of products to satisfy a customer's complete video communication needs will be important to its future success.
- *Compliance with industry standards*—CLI believes that the adoption of industry standards will further the expansion of the worldwide videoconferencing market by allowing systems from different manufacturers to communicate with one another. CLI's Rembrandt II/VP, Radiance, *eclipse*, and CLI Desktop Video product families all conform with the TSS H.320 videoconferencing standard that allows communication with CLI and other vendors' products through industry-standard communication modes. The group systems provide a user-selectable option that allows enhanced video when communicating with other CLI systems through CLI's proprietary communication modes.

Financials

CLI's 1995 revenue from continuing operations was \$113 million, a 2% decrease from \$115 million in 1994.

- The decrease in revenue was primarily due to a decrease in videoconferencing unit volume, partially offset by higher average selling prices in the videoconferencing market and increased installation and maintenance revenue.
- Unit volume of CLI's codec products decreased 11% to 2,322 units in 1995 from 2,609 units in 1994.

Net losses were \$57.6 million in 1995, compared to net income of \$107,000 in 1994.

- Losses from continuing operations were \$21 million in 1995, compared to \$4.9 million in 1994. Losses were impacted by fourth-quarter charges of \$11 million for restructuring.
- Losses from discontinued operations were \$36.5 million in 1995, compared to net income from discontinued operations of \$5 million in 1994. The loss in 1995 includes charges of \$34.6 million for the write-down of assets associated with the Broadcast Division.

In the five-year summary on the following page, financials have been restated to reflect CLI's Broadcast Division as discontinued operations.

Compression Labs, Incorporated
Five-Year Financial Summary
(\$ Millions, except per share data)

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	\$113.0	\$115.0	\$95.1	\$95.0	\$61.3
• Percent change from previous year	(2%)	21%	—	55%	N/A
Income (loss) from continuing operations	\$(21.0)	\$(4.9)	\$(12.2)	\$(3.4)	\$(17.9)
• Percent change from previous year	(331%)	60%	(256%)	81%	N/A
Income (loss) from discontinued operations	\$(36.5) (a)	\$5.0	\$8.7	\$0.1	\$2.8
Net income (loss)	\$(57.6)	\$0.1	\$(3.5)	\$(3.3)	\$(15.1)
• Percent change from previous year	(b) *	103%	(6%)	78%	N/A
Net earnings (loss) per share	\$(3.76)	\$0.01	\$(0.30)	\$(0.29)	\$(1.55)
• Percent change from previous year	*	103%	(38%)	81%	N/A

* Not meaningful.

(a) Includes charges of \$34.6 million related to discontinuing the operations of the Broadcast Division.

(b) Includes restructuring charges of \$11 million.

Total research and development expenditures, including capitalized software development costs, were \$14.8 million (13% of revenue) in 1995, \$15.1 million (13% of revenue) in 1994, and \$13.4 million (14% of revenue) in 1993.

Revenue Analysis by Product/Service

Approximately 67% of CLI's 1995 revenue was derived from its videoconferencing products and 33% from broadcast products.

Interim Results

Revenue from continuing operations for the three months ending March 31, 1996 was \$20 million, compared to \$27.9 million for the same period in 1995. Net losses were \$6.2 million, compared to losses of \$2.1 million for the same period a year ago.

- Revenue declines and losses were anticipated due to the restructuring actions taken in the quarter.
- Included in the losses is a \$1.7 million charge associated with the restructuring.
- Gross margins improved to 45% compared to 37% for the same period a year ago, reflecting continued product cost reduction for videoconferencing products.

Market Financials

CLI's products have been sold to organizations in such industries as aerospace, banking, communications, broadcasting, education, electronics, food and consumer products, and pharmaceuticals, as well as in government.

Geographic Markets

Approximately 78% of CLI's 1995 revenue was derived from the U.S. and 22% from international sources, primarily from

customers located in East Asia, Australia, and Western Europe.

A three-year geographic summary of source of revenue is shown below.

Compression Labs, Incorporated Three-Year Geographic Source of Revenue Summary (\$ Millions)

Geographic Market	Fiscal Year					
	1995		1994		1993	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$88.7	78%	\$93.9	82%	\$82.7	87%
International	24.3	22%	21.1	18%	12.4	13%
Total	\$113.0	100%	\$115.0	100%	\$95.1	100%

Employees

As of February 29, 1996, CLI had 439 full-time employees in its continuing operations, segmented as follows:

Marketing and sales.....	158
Engineering, research, and development	94
Manufacturing.....	129
Administration	<u>58</u>
	439

As of February 29, 1996, CLI also employed 100 people full-time in its broadcast vision, which is reported as a discontinued operation.

In addition, CLI has a number of temporary employees.

Key Products and Services

Videoconferencing Products

CLI's videoconferencing systems offer two-way, full-color, motion videoconferencing at various bandwidths ranging from 56 kbps to 2,048 mbps.

- The systems enable the user to transmit video, audio, data, and graphics over digital channels.
- The principal component in CLI's videoconferencing systems is the codec. One codec is required at each conference site to perform both coding and decoding functions.
- System users can transmit the compressed signals over terrestrial, satellite, or microwave networks.
- CLI's videoconferencing products are used in point-to-point or multipoint videoconferences. In a point-to-point videoconference, audio and full-color motion images are transmitted simultaneously in both directions so that the participants at one site interact with the participants at the other site as in a normal meeting. In a multipoint conference, participants in three or more locations can interact with each location and are able to see and hear the participant who is speaking.

- CLI systems work in conjunction with both dedicated network facilities and a variety of switched network facilities.

- CLI's current installed base totals more than 13,000 codecs worldwide.

CLI offers a range of group and desktop videoconferencing products as follows:

- The Rembrandt II/VP large group video codec family, introduced in 1991, incorporates CLI's CDV technology. Its codecs address the entire spectrum of videoconferencing applications in a single product.
 - The codecs support transmission rates ranging from 56 kbps to 2.048 mbps, support the CTX and CTX Plus proprietary algorithms, provide backward compatibility to CLI's older products, and support the H.261 standard.
 - These systems range in price from \$35,000 to \$48,500, excluding options.
- The Radiance large group videoconferencing systems, first shipped in January 1994, are complete prepackaged large group systems that achieve up to 30 frames per second (fps) and 480 lines of resolution at bandwidths ranging from 56 kbps to 2.048 mbps.
 - These systems come fully assembled for ease of installation, use, and maintenance, and use a tabletop touch panel based on CLI's Self-Guide™ user interface, which provides intuitive control via menus and icons to guide the user.
 - The Radiance list prices range from \$43,400 to \$77,900, excluding options.
- *eclipse* midrange group videoconferencing systems, introduced in 1993, are complete,

full-featured videoconferencing systems priced as low as \$14,900.

- The codec is housed in an Intel 486 personal computer chassis with both a hard disk and 3-1/2 inch floppy disk for software updates.
- In 1995, the *eclipse* product family was expanded to include various models ranging from tabletop to dual-monitor systems. The *eclipse gold*, introduced in 1996, offers improved video quality and a multimedia gateway.
- *eclipse* list prices range from \$14,900 to \$47,8900, excluding options.
- CLI Desktop Video Systems, announced in January 1996, run on PCs powered by Intel Pentium microprocessors under Microsoft Windows 3.1 and Windows 95.
 - This family of products will include two models: CLI Desktop Video 1000 and CLI Desktop Video 2000. These products are kits consisting of a fixed digital camera, a single codec board incorporating an ISDN basic rate interface, a telephone handset, and a choice of data collaboration software, including Intel's ProShare Premier data collaboration software. In the future, the product will also support DataBeam's FarSite data collaboration software.
 - The CLI Desktop Video 1000 and 2000 models are capable of transmission speeds ranging from 56 kbps to 384 kbps.
 - CLI Desktop Video list prices range from \$1,495 to \$2,195, excluding options.

CLI also offers the Multipoint 2 Control Unit (MCU), a device that allows people at multiple

locations to participate in a fully interactive videoconference.

- During a multipoint videoconference, the MCU acts as an audio bridge and a controller, switching among different sites so participants can see the person who is speaking and hear all other participants in the conference.
- List prices for MCUs range from approximately \$26,500 for a three-user unit to approximately \$89,500 for a large system usable in a headquarters location, depending on the number of ports and options required.

Broadcast Products

CLI has discontinued the operations of its Broadcast Division. Products marketed through this unit through November 1995 included the following:

- The SpectrumSaver digital broadcast television system for business television, distance learning, satellite news gathering, and cable applications
- The Magnitude family of CLI broadcast video products for the delivery of entertainment and information services over telephone, cable, and satellite networks

Customer Service and Support

CLI provides service and support in more than 50 countries worldwide, either directly or in conjunction with its distributors, resellers, and contract service providers.

- CLI and its contract service providers typically provide support to all customers to which CLI sells direct.

- Customers who buy CLI products indirectly generally receive their primary level of support from CLI's resellers and supplemental support from CLI.
- All distributors, resellers, and service providers are trained by CLI to provide the appropriate level of service for CLI products.

CLI's service strategy for much of its product line is predicated on designing products with diagnostic capabilities and maintaining a toll-free customer support hotline staffed by technical support personnel who diagnose problems remotely. The remote diagnostic capabilities of many of CLI's products often allow CLI technical support center personnel to service products without making on-site service visits.

To further augment CLI's service capabilities, CLI signed an agreement in late 1995 with AT&T under which AT&T will supply technicians who will provide installation and service for designated CLI videoconferencing customers throughout the U.S.

CLI provides installation and on-site service through regionally deployed technical support staff in select major cities or regional, national, or multinational third-party service providers. CLI offers a range of maintenance plans. Historically, maintenance revenue has accounted for less than 10% of total revenue.

Clients

A list of selected customers who have placed orders with CLI over the past two years is shown in the exhibit on the following page.

Exhibit

Compression Labs, Incorporated Key Clients

Industry Market/Clients	Industry Market/Clients	Industry Market/Clients
Aerospace Hughes Aircraft Company Lockheed Corporation Loral Corporation Martin Marietta Corporation Rockwell International Corporation	Education Duke University Eastern Washington State Univ. Texas Tech University University of California University of Hawaii University of Idaho University of Massachusetts University of Missouri University of Nevada, Reno University of Pennsylvania University of Texas University of Washington Vermont Technical College Washington State University	Government NASA China Railway Import & Export Sichuan Provincial Import Corp. State of Florida State of Hawaii State of Kansas State of Washington U.S. Department of Defense U.S. Department of Energy U.S. Federal Emergency Management Agency (FEMA) U.S. General Accounting Office U.S. General Services Administration
Banking & Finance Bank of America Corporation Citibank, N.A. Citicorp MasterCard International, Inc. Visa Inc.	Electronics Advanced Micro Devices, Inc. Boeing Computer Services Harris Corporation Hewlett-Packard Company IBM Corporation Mentor Graphics Corporation MicroAge, Inc. Micron Technology, Inc. National Semiconductor Samsung Electronics Corporation, Ltd. Unisys Corporation Westinghouse Electric Corporation	Pharmaceutical & Health Care Glaxo Wellcome Columbia-HCA Healthcare Corp. Empire Blue Cross/Blue Shield Harvard Community Health Plan Pharmacy Corp. of America Schering-Plough Corporation UT Medical Branch at Galveston Warner-Lambert
Telecommunications Ameritech Services, Inc. American Telephone & Telegraph Bell Atlantic Bell Canada BellSouth Services, Inc. Comtelca Deutsche Telekom AG GTE Government Systems Hughes Network Systems JS TELECOM MCI Telecommunications Corp. Mitre Corporation NYNEX Corporation Nevada Bell Norstan Communications Pacific Bell SBC Communications (Southern Bell) Sprint/North Supply TIE/communications Williams Telecommunications, Inc.	Food/Consumer Products Black & Decker The Coca-Cola Company Kimberly Clark Corporation Nabisco Brands, Incorporated Nestle USA Nordstrom Phillips Van Heusen Williams Sonoma	Other Alcoa Fujikura Ltd. Boston Consulting Group Consolidated Edison KPMG Peat Marwick McKinsey & Co. Pacific Gas & Electric Toyota Motor Sales USA VF Corporation

Marketing and Sales/Alliances

CLI markets its videoconferencing systems to business, government, health care and education customers. These customers frequently have multiple domestic and/or international locations and often specify a single vendor to supply videoconferencing equipment on a worldwide basis.

In 1995, approximately 35% of CLI's revenue from videoconferencing products was from indirect sales channels, which include resellers and comarketers.

- CLI has comarketing agreements or arrangements with AT&T and MCI Communications. These comarketers provide sales leads and customer prospects for direct customer sales by CLI's domestic sales force.
- In addition, CLI has a number of reseller agreements in the U.S. with companies including Bell Atlantic, Norstan, TIE/communications, Inter-Tel Equipment Corporation, Pacific Bell, and Williams Telecommunications, Inc. (WiTel). These resellers sell CLI's videoconferencing products directly to users.
- CLI has also entered into distributor agreements with companies such as MicroAge and Sprint/North Supply.

Internationally, CLI markets its videoconferencing products in most countries outside the U.S. through distributors.

- Historically, a significant portion of CLI's sales have been to its existing customer base. CLI is attempting to increase its new-customer base by expanding its distribution channels.
- CLI's products are distributed in more than 50 countries outside the U.S. under

distribution agreements and arrangements with more than 30 companies, including Internet Video Communications in the U.K., J S TELECOM (a subsidiary of Bosch Telekom) in France, Deutsche Telekom in Germany and worldwide, SOEI Tsusho Company Ltd. in Japan, Samsung in Korea, Teledata in Southeast Asia, and Keytech S.A. in South America.

- In May 1996, CLI announced an agreement with McDonnell Information Systems Pty Ltd. (MDIS) whereby MDIS will distribute and support CLI's group and desktop videoconferencing products in Australia and New Zealand.
- Agreements with these distributors generally provide for pricing and volume discounts, order lead times, designation of a specific geographic territory, and other terms and conditions.
- Distributors typically order products only upon receipt of an order from a user customer and generally provide local customer support, including installation and maintenance.

Broadcast products were distributed primarily through value-added resellers, which included satellite transponder owners, full-service integrators, systems integrators, and broadcast programmers who provide the user with a complete, installed digital satellite system. CLI has agreements in place with Westcott Communications, AT&T, EDS, Keytech S.A., Radiation Systems Incorporated, National Technological University, Vitacom, and others.

Competition

CLI believes that the market for videoconferencing systems ranges from applications for more formal meetings that require very high picture quality using higher

bandwidths to applications such as informal meetings in which reduced picture quality at lower bandwidths is acceptable in return for significantly lower equipment and transmission costs.

At the higher bandwidths, CLI's major competitors include VTEL Corporation, General Plessey Telecommunications, and British Telecom.

At lower bandwidths, primary competitors include PictureTel Corporation and VTEL Corporation.

CLI expects other competitors to enter the videoconferencing market, such as Japanese manufacturers (Mitsubishi Ltd., Nippon Electric Corporation, Sony Corporation, Hitachi Limited, and Fujitsu Ltd.).

COMPANY HIGHLIGHT

COMPUCARE, INC.
8200 Greensboro Drive, Suite 800
McLean, VA 22102
(703) 821-8858

Ronald V. Aprahamian, Chairman and
President
Public Corporation, OTC
Total Employees: 700
Total Revenue, Fiscal Year End
12/31/83: \$39,879,000
Total Computer Services Revenue:
\$34,279,000

THE COMPANY

- Compucare, Inc., incorporated in 1975, evolved from a predecessor corporation which was founded in 1968. The company is one of the leading suppliers of information systems management services to hospitals and other health care institutions. In addition, Compucare markets applications software and integrated systems to the medical industry. As part of its single-source management services, Compucare purchases and resells computer hardware.
- In the past five years, Compucare has acquired four companies.
 - Hospital Resources, Inc. (HRI) of Fountain Valley (CA) was acquired in August 1979. HRI provided computer consulting and facilities management services to hospitals.
 - Space Age Computer Systems, Inc. of Washington (D.C.) was acquired on August 19, 1982. The company, which was merged into Compucare, provided facilities management services to hospitals. Compucare paid \$7.4 million in cash plus \$96,000 in acquisition costs.
 - PCI Systems, Inc. of Cincinnati (OH) was acquired on April 29, 1983, for \$5 million in cash plus \$56,000 in acquisition costs. PCI marketed and installed applications software and provided consulting services to hospitals. Compucare established the PCI Systems Division as a result of this acquisition.
 - On April 16, 1984, Compucare acquired Ohio Micro Systems, Inc. (OMS) of Kent (OH) for approximately \$770,000. Previously, Compucare had an exclusive license to use, develop, market, and distribute OMS' software for physician office management applications. Compucare established the Physician Systems Division as a result of gaining the exclusive license.
- 1983 revenue of \$39.8 million represented an increase of 89% over 1982 revenue of \$21 million. Net income rose 87% to \$2.1 million in 1983 from \$1.1 million in 1982. A four-year financial summary follows:

COMPU CARE

COMPU CARE, INC. Four-Year Financial Summary (a) (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1983	1982	1981	1980
Revenue	\$ 39,879	\$ 21,060	\$ 10,452	\$ 6,768
• Percent increase from previous year	89%	101%	54%	N/A
Income before taxes	\$ 3,679	\$ 2,002	\$ 1,200	\$ 297
• Percent increase from previous year	84%	67%	304%	N/A
Net income	\$ 2,134	\$ 1,143	\$ 655	\$ 183
• Percent increase from previous year	87%	75%	258%	N/A
Earnings per share (b)	\$ 0.46	\$ 0.31	\$ 0.21	\$ 0.06
• Percent increase from previous year	48%	48%	250%	N/A

(a) Compucare management did not report data for 1979, as certain accounting records from that year are unavailable.

(b) Adjusted to reflect a two-for-one stock split effected on April 29, 1983.

- Research and development expenses for the years 1981, 1982, and 1983 were \$272,000, \$412,000, and \$2,049,000, respectively. The large increase in spending in 1983 reflects Compucare's efforts toward developing and expanding the company's software library, including final testing of the PMAS (Patient Management Application System) product.
- On November 10, 1983, Compucare made an initial public offering of one million shares of common stock. The net proceeds of this offering are being used to repay indebtedness related to the acquisitions of Space Age Computer Systems and PCI Systems and for possible future acquisitions or investments.
- As of July 30, 1984, Compucare employed approximately 800 people, segmented as follows:

Marketing/sales	20
Operations/development	580
General and administrative	100
Technical support staff	<u>100</u>
	800

- In providing facilities management services to hospitals, Compucare competes against Kean, Inc. and Mediflex Systems Inc. Competition for Compucare's

PCI Systems Division hospital applications software comes from Health Information Systems Inc., Mediflex, and IBM, among others. In the integrated systems area, Compucare competes against SMS, MCAUTO, HBO & Company, and IBM.

KEY PRODUCTS AND SERVICES

- Professional management services accounted for 79% of Compucare's 1983 revenue. Software products offered through the PCI Systems Division accounted for 6% of total revenue, while turnkey systems sales through the Physician Systems Division amounted to 1%. The Management Services segment of the company, which includes facilities management, also purchases and resells computer hardware to some of its customers. The sale of such equipment amounted to 14% of total revenue in 1983.
- The contribution of each operating division to total company revenue and profit in 1983 is shown below (\$ thousands):

	<u>Revenue</u>	<u>Operating Profit (Loss)</u>
Management Services (a)	\$37,104	\$5,680
PCI Systems Division	2,338	(392)
Physician Systems Division	<u>437</u>	<u>(154)</u>
Total	\$39,879	\$5,134

(a) Includes \$5.6 million in equipment sales.

- Compucare's Management Services unit offers a broad range of services to health care institutions, primarily hospitals and multi-hospital groups. Under facilities management contracts, Compucare provides software and full-time on-site management and technical staff to customize, install, manage, and operate a customer's in-house computer system.
 - Compucare's staff has expertise in systems analysis, computer operations, programming, project management, and industrial engineering. The Compucare team works with hospital management to plan, design, implement, and customize systems, as well as provide training and education for hospital staff.
 - Compucare provides its customers with access to a library of software packages for financial, administrative, and clinical applications. The software runs on hardware manufactured by Data General, IBM, DEC, and other vendors and is available in several languages including MIIS, ASSEMBLER, COBOL, FORTRAN, PLI, and RPG.
 - As of June 30, 1984, Compucare served over 150 health care institutions, including independent hospitals, health maintenance organizations, and hospital chains and associations.

- The Management Services Division markets DMAS (Distributed Management Application System), a fully integrated minicomputer-based hospital information system. DMAS was developed by Compucare as a result of customer-sponsored research and development under an FM contract beginning in 1975. Although Compucare has DMAS available for sale, it is offered primarily as a part of the company's FM services to medium-sized hospitals (200 to 500 beds). DMAS supports applications in the following areas:
 - . Patient accounting.
 - . Accounts receivable.
 - . Accounts payable.
 - . General ledger.
 - . Budgeting.
 - . Payroll/personnel.
 - . Materials management.
 - . Fixed asset accounting.
 - . DRG/case mix.
 - . Admission/registration.
 - . Pharmacy.
 - . Laboratory.
 - . Radiology.
 - . Medical records.
 - . Order communications.
 - . Results reporting.
 - . Nursing management.
- The PCI Systems Division was established in 1983 as a result of the acquisition of PCI Systems Inc. This group markets applications software to health care institutions.
 - The principal product, PMAS (Patient Management Application System) was acquired along with PCI Systems, Inc. It was developed as an enhancement to IBM's Patient Care System/Application Development System and runs on IBM mainframes (4331 and up). PMAS supports hospital applications in admission/registration, finance, and order communications.
- The Physician Systems Division was established in 1983 as a result of the acquisition of an exclusive license for applications software for physicians from Ohio Micro Systems, Inc. This division supplies a microcomputer-based integrated physician practice management system. The system, called MED 2000, supports a complete patient billing function, insurance forms preparation, administrative reporting, medical research, and word processing. MED 2000 can be interfaced to a variety of hospital information systems, including DMAS and PMAS. Introduced in the fourth quarter of 1983, the MED 2000 system runs on IBM PCs, which Compucare packages for its customers.

COMPUCARE

INDUSTRY MARKETS

- One hundred percent of Compucare's revenue is derived from the medical industry. The primary target market consists of the approximately 3,000 hospitals in the U.S. having 100 beds or more. However, Compucare's customers range from small, rural hospitals of fewer than 100 beds to large, urban university teaching hospitals.
- Compucare's largest customer is the Adventist Health System/Sunbelt Health Care Corporation. Under a facilities management contract, which was acquired along with Space Age Computer Systems in August 1982, Compucare realized \$5,132,000 in revenue in 1983. This represents 12.9% of total company revenue.

GEOGRAPHIC MARKETS

- Ninety-eight percent of Compucare's 1983 revenue was derived from customers in the U.S. The remainder was derived from an agreement with a health services company in Saudi Arabia whereby the Saudi company has an exclusive license to use and/or sell some of Compucare's applications software, limited to certain Arab countries.
- Compucare's Management Services unit has offices in Fountain Valley (CA), Tampa, Minneapolis, Cleveland, and McLean (VA). The PCI Systems Division has offices in Cincinnati and Raleigh. The Physician Systems Division has offices in Fountain Valley, Tampa, Kansas City (MO), Kent (OH), and Pittsburgh.

COMPUTER HARDWARE AND SOFTWARE

- Compucare owns or leases a variety of computer equipment, including several CPUs and related peripheral equipment. A substantial portion of the leased hardware is used by the company in performance of FM contracts. The costs associated with the leases are charged to customers under these contracts.



COMPANY PROFILE

COMP-U-CHECK, INC.

16250 Northland Drive
Southfield, MI 48075
(313) 569-1448

Joseph A. Sullivan, Chairman
Martin R. Durbec, President
Subsidiary of OTF Equities, Inc.
Total Employees: 92 (Full-time)
Total Revenue, Fiscal Year End
11/30/88: \$8,737,961

The Company

Comp-U-Check, Inc. provides various processing services to retailers and financial institutions, including check guarantee, verification, and collection services and private label credit card services.

Comp-U-Checks fiscal 1988 revenue reached \$8.7 million, a 9% increase over fiscal 1987 revenue of \$8 million. Net losses for fiscal 1988 were \$390,000, compared to losses of \$1.2 million for fiscal 1987. A five-year financial summary follows:

COMP-U-CHECK, INC.
FIVE-YEAR FINANCIAL SUMMARY
 (\$ thousands, except per share data)

ITEM	FISCAL YEAR				
	11/88	11/87	11/86	11/85	11/84
Revenue	\$8,738	\$7,989	\$7,120	\$7,945	\$6,642
• Percent increase (decrease) from previous year	9%	12%	(10%)	20%	N/A
Income (loss) before taxes	\$(536)	\$(1,735)	\$348	\$555	\$767
• Percent increase (decrease) from previous year	69%	(599%)	(37%)	(28%)	N/A
Net income (loss)	\$(390)	\$(1,211)	\$233	\$345	\$394
• Percent increase (decrease) from previous year	68%	(629%)	(32%)	(12%)	N/A
Earnings (loss) per share	\$(0.29)	\$(0.91)	\$0.17	\$0.26	\$0.30
• Percent increase (decrease) from previous year	68%	(635%)	(35%)	(13%)	N/A

Revenue for the six months ending May 31, 1989 was nearly \$4 million, a 14% decrease from \$4.6 million for the same period in 1988. Net losses were \$1.1 million, compared to net income of \$298,283 for the same period a year ago.

- Revenue declines were attributed primarily to decreases in private label credit card interest and service fees due to a decreased card holder base.
- Check guarantee revenue declined 7% due to lower average billing rates. Check verification and FORBANK revenue declined 31% due primarily to the loss of a major directory customer.
- Operating expenses rose 15%. The provision for uncollected checks increased \$526,000 and bad debt expense increased \$201,000.

As of February 1989, Comp-U-Check had 92 full-time and 34 part-time employees.

Major competitors include Telecredit and TeleCheck Services.

Key Products and Services

Approximately 94% of Comp-U-Check's fiscal 1988 revenue was derived from its various check guarantee, check verification, and credit card processing services. Five percent of revenue was derived from collection agency services and 1% from other sources.

A three-year summary of source of revenue follows:

**COMP-U-CHECK, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ thousands)**

ITEM	FISCAL YEAR					
	11/88		11/87		11/86	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Check guarantee	\$5,798	66%	\$5,543	72%	\$5,707	82%
Credit card services	1,885	22%	1,421	18%	443	6%
Collection services	663	8%	453	4%	255	3%
Check verification	256	3%	392	5%	393	4%
Other	136	1%	180	1%	322	5%
TOTAL	\$8,738	100%	\$7,989	100%	\$7,120	100%

Comp-U-Check's check guarantee service is provided to retail merchants throughout the U.S. under the name Sure-Check™.

- Comp-U-Check maintains a data base of information concerning dishonored checks, checks written with insufficient funds, and stolen or counterfeit checks. Subscribers to the service and other sources (including law enforcement agencies and business and retail associations) voluntarily provide this information to Comp-U-Check on a continuing basis.
- Access to Comp-U-Check's data center is available via customer computers, point-of-sale terminals, or telephone.

- If a guaranteed check is subsequently dishonored, Comp-U-Check must reimburse the subscriber for the face amount of the dishonored check.
- Charges for the service are based on a percentage of the total face amount of checks guaranteed.
- As of February 1989, Comp-U-Check had approximately 3,500 check guarantee service subscribers.

Comp-U-Check's check verification service for retailers is marketed under the name Take-A-Check™. FORBANK is a similar service available to financial institutions in the Detroit area.

- Comp-U-Check furnishes check verification subscribers with information in a coded form via printed directories, operator-assisted phone calls, computer tapes, direct computer-to-computer communication, point-of-sale terminals, and touch-tone audio response units.
- Comp-U-Check charges a monthly fee in connection with directory or computer tape information, and a charge-per-call for the other forms of delivery.
- A verification service subscriber who obtains information from Comp-U-Check must decide whether or not to accept the check. Comp-U-Check does not guarantee against losses under this service.
- As of February 1989, Comp-U-Check had approximately 200 Take-A-Check subscribers and 900 FORBANK subscriber locations.

Private label credit card services, introduced during fiscal 1986, are provided to retailers through two Comp-U-Check subsidiaries.

- Comp-U-Check Retail Services, Inc. provides administrative support to distribute the retailers' credit cards and establish individual customer accounts. Comp-U-Check provides all the billing, customer relations, collection, and other services required for each account. Fees for these services are based on the number of accounts serviced for each retailer.
- Comp-U-Check Credit, Inc. finances credit balances for retailers.

- During fiscal 1986, Comp-U-Check entered into private label credit card agreements with seven retailers. During fiscal 1987, nine retailers with 49 retail outlets were added to the service. During fiscal 1988, four more retailers with 51 retail outlets were added to the service and two retailers with 27 retail outlets discontinued using the service.
- Comp-U-Check is liquidating its private label credit card portfolios to pay down a demand loan.

Comp-U-Check provides collection agency services through its Comp-U-Check Collections Inc. subsidiary.

- Comp-U-Check Collections collects checks and accounts receivable for others on a contingent fee basis, collects checks purchased by Comp-U-Check through its Sure-Check service, and markets collection letters and skip tracing services.
- Services are provided to various businesses, including medical facilities, educational institutions, financial institutions, and retailers.
- As of February 1989, Comp-U-Check was providing collection services to approximately 200 clients.

Industry Markets

The majority of Comp-U-Check's revenue is derived from retailers. The remainder is derived from the banking and finance and other industries.

Customers include various retailers, financial institutions, hospitals, supermarkets, utilities, hotels, and automobile dealers.

Geographic Markets

One hundred percent of Comp-U-Check's revenue is derived from the U.S.

Computer Hardware

Comp-U-Check owns two IBM 4341 computers, which are installed in Southfield.

Clients of Comp-U-Check's check guarantee and check verification services may access the Comp-U-Check data center 24 hours a day, seven days a week.

COMPANY PROFILE

COMP-U-CHECK, INC.
16250 Northland Drive
Southfield, MI 48075
(313) 569-1448

Ronald T. Hill, President and
Chief Operating Officer
Subsidiary of OTF Equities, Inc.
Total Employees: 88
Total Revenue, Fiscal Year End
11/30/84: \$6,642,160

THE COMPANY

- Comp-U-Check, founded in 1967, provides check guarantee, verification, and collection processing services primarily to the retail industry.
 - On November 1, 1982 Comp-U-Check was acquired by OTF Equities, Inc.
- Comp-U-Check's fiscal 1984 revenue reached \$6.6 million, a 12% increase over fiscal 1983 revenue of \$5.9 million. Net income rose 9% from \$360,958 in fiscal 1983 to \$393,642 in fiscal 1984. A five-year financial summary follows:

COMP-U-CHECK, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	11/84	11/83	11/82	11/81	11/80
Revenue	\$ 6,642	\$ 5,907	\$ 4,852	\$ 4,028	\$ 3,406
• Percent increase from previous year	12%	22%	20%	18%	19%
Income before taxes	\$ 767	\$ 547	\$ 360	\$ 243	\$ 82
• Percent increase from previous year	40%	52%	49%	195%	220%
Net income	\$ 394	\$ 361	\$ 308	\$ 243	\$ 82
• Percent increase from previous year	9%	17%	27%	195%	220%
Earnings per share	\$ 0.30	\$ 0.28	\$ 0.24	\$ 0.19	\$ 0.07
• Percent increase from previous year	7%	17%	26%	171%	217%

COMP-U-CHECK, INC.

- Revenue for the three months ending February 28, 1985 was nearly \$2 million, a 26% increase over approximately \$1.6 million for the same period in 1984. Net income for the period rose 34% from \$80,164 in 1983 to \$107,645 in 1984.
- As of February 15, 1985, Comp-U-Check had 55 full time employees and 33 part time employees. Comp-U-Check also hires additional employees to assist in operations at the peak seasons of Comp-U-Check's business.
- Principal competitors include Telecredit, Inc., and TeleCheck Services, Inc. (McDonnell Douglas Information Systems Group).

KEY PRODUCTS AND SERVICES

- Approximately 81% of fiscal 1984 revenue was derived from check guarantee processing services. Check verification services accounted for approximately 7%. The remaining 12% was derived from collection agency services, the FORBANK service, and other services.
- SureCheck is a check guarantee service provided to retailers and banks through operator assisted phone calls, audio response units, point of sale terminals, and direct computer-to-computer communications.
 - Comp-U-Check maintains a data base of information concerning worthless checks, checks with insufficient funds, and other similar information, including information relating to stolen or counterfeit checks. The customer's name and driver's license number can be used to search the company's information file.
 - The information is voluntarily provided on a continuing basis to Comp-U-Check from subscribers to the guarantee service, law enforcement authorities, business and retail associations, and other sources who are not Comp-U-Check subscribers.
 - After searching its data base, Comp-U-Check may or may not guarantee the check. If a guaranteed check is dishonored Comp-U-Check must reimburse the subscriber the face amount of the check.
 - Subscribers are usually charged a percentage, based on volume, of the face amount of the checks.
 - The total value of checks guaranteed by Comp-U-Check in fiscal 1984 was over \$300 million.
- Take-A-Check is Comp-U-Check's check verification service. Comp-U-Check supplies subscribers with information in a coded form which allows the subscriber to decide whether or not to accept a check. Comp-U-Check does not guarantee the subscriber against losses on checks under the Take-A-Check service.

COMP-U-CHECK, INC.

- Comp-U-Check provides the information in coded form through various means including a printed directory, computer tapes, operator assisted phone calls, touch tone audio response units, direct computer-to-computer communications, and point of sale terminals.
- Subscribers are charged a monthly fee for information delivered in directory or computer tape form, and a charge per call for the other forms of delivery of information.
- Comp-U-Check offers a service to banks under the trade name FORBANK. FORBANK allows customers to access Comp-U-Check's online data base of checking accounts that are closed for cause.
 - The data base information is voluntarily submitted by participating banks and allows the FORBANK customers to evaluate applications for new accounts and to obtain information on applicants who have previously abused accounts.
 - Pricing is based on a fixed fee per inquiry.
 - The company's FORBANK service is offered primarily in the Great Lakes region of the U.S.
- Comp-U-Check provides collection agency services through its collection division, Comp-U-Check Collections.
 - Comp-U-Check Collections collects checks and accounts receivable for customers on a contingent fee basis. It also collects checks purchased by Comp-U-Check through its SureCheck service. Comp-U-Check Collections also markets collection letters, attorney's letters, and skip tracing services.
 - Comp-U-Check Collections serves a variety of industries including the medical, utility, education, banking and finance, and retail industries.
- In 1984 Comp-U-Check began to develop the software and computer system needed to begin marketing a private label credit card (PLCC) service.
 - Comp-U-Check plans to use its computer to authorize and process individual purchases when a retail buyer uses a merchant's private credit card. Comp-U-Check would then use the information to prepare and issue monthly billing statements to the credit card user. The company would also advance cash to its customers on credit sales processed through the PLCC system.
 - Generally, Comp-U-Check would be repaid for such advances by the purchaser of the goods from the retail merchant when the purchaser pays his monthly bill.

COMP-U-CHECK, INC.

- In December 1984, Comp-U-Check signed a letter of intent with a Michigan-based regional chain of retail stores selling women's apparel, to provide their stores with the PLCC services. A test began in February 1985 and a contract is scheduled to be signed in the second quarter of 1985.

INDUSTRY MARKETS

- Comp-U-Check's fiscal 1984 revenue was derived primarily from the retail industry including retail merchants, supermarkets, hotels, and automobile dealers. Other clients include financial institutions, hospitals, and utility companies.
- The target market for check guarantee and verification services is large retail merchants.
- The target market for collection agency services is hospitals.
- The target market for the FORBANK service is financial institutions in the Michigan area.

GEOGRAPHIC MARKETS

- Virtually 100% of Comp-U-Check's fiscal 1984 revenue was derived from the U.S.
 - Check guarantee, check verification, and collection agency services are offered on a national basis.
 - For its FORBANK service, clients are primarily in the state of Michigan.
- Comp-U-Check has regional centers in Atlanta and Chicago.

COMPUTER HARDWARE AND SOFTWARE

- Comp-U-Check has two leased IBM 4341 computers, operating under BETACOM, installed in Southfield.
- Clients of Comp-U-Check's check guarantee and check verification services may access the Comp-U-Check data center 24 hours a day, seven days a week as follows:
 - Direct dial for operator assisted services.
 - Touch tone telephone for computer generated audio response.
 - WATS telephone lines for point of sale terminals.
 - Leased lines for computer-to-computer communications.

FINANCIAL UPDATE TO PROFILE DATED SEPTEMBER 1984

COMPUWARE, INC.
2051 Mercator Drive
Reston, VA 22091
(703) 648-9000

Ronald V. Aprahamian, Chairman and
President
Public Corporation, OTC
Total Employees: 850
Total Revenue, Fiscal Year End
12/31/84: \$51,353,000
Total Computer Services Revenue:
\$43,385,000

COMPUWARE, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1984	1983	1982	1981	1980
Revenue	\$ 51,353	\$ 39,879	\$ 21,060	\$ 10,452	\$ 6,768
• Percent increase from previous year	29%	89%	101%	54%	N/A
Income before taxes	\$ 1,976	\$ 3,679	\$ 2,002	\$ 1,200	\$ 297
• Percent increase (decrease) from previous year	(46%)	84%	67%	304%	N/A
Net income	\$ 1,170	\$ 2,134	\$ 1,143	\$ 655	\$ 183
• Percent increase (decrease) from previous year	(45%)	87%	75%	258%	N/A
Earnings per share	\$ 0.21	\$ 0.46	\$ 0.31	\$ 0.21	\$ 0.06
• Percent increase (decrease) from previous year	(54%)	48%	48%	250%	N/A

- Compuware management attributes the decline in earnings to continuing startup expenses associated with the company's PCI and Physician's Systems Divisions.
- Revenue for the three months ending March 31, 1985 was \$11.4 million, a 4% increase over \$11 million for the same period in 1984. Net losses for the period were \$942,000, compared to net income of \$369,000 for the first quarter in 1984. Compuware management attributes the losses to continuing expenses associated with the PCI Division, increased corporate overhead

COMPU CARE, INC.

expenses, and added expenses related to the proposed merger with Baxter Travenol described below.

- In April 1985 Compucare and Baxter Travenol Laboratories, Inc. announced the signing of a definitive agreement whereby Baxter Travenol would acquire Compucare in a pooling of interest stock transaction valued at approximately \$73 million. The transaction was finalized on May 29, 1985.

SOURCE OF REVENUE

- Professional management services accounted for approximately 68% of Compucare's 1984 revenue. Software products and associated support services offered through the PCI Systems Division accounted for 10% of revenue, while turnkey systems sales through the Physician Systems Division amounted to 6%. The Management Services segment of the company, which includes facilities management, also purchases and resells computer hardware to some of its customers. The sale of such equipment amounted to 16% of total revenue.
- The contribution of each operating division to total company revenue and profit in 1984 is shown below (\$ thousands):

	<u>Revenue</u>	<u>Operating Profit (Loss)</u>
Management Services (a)	\$43,255	\$5,161
PCI Systems Division	5,207	(1,942)
Physicians Systems Division	<u>2,891</u>	<u>(171)</u>
	\$51,353	\$3,048

- (a) Includes \$1.7 million in software licenses and \$8 million in equipment sales.

FINANCIAL UPDATE TO PROFILE DATED MAY 1985

COMP-U-CHECK, INC.
16250 Northland Drive
Southfield, MI 48075
(313) 569-1448

David T. Marantette III, Chairman and
CEO
Ronald T. Hill, President and Chief
Operating Officer
Subsidiary of OTF Equities, Inc.
Total Employees: 146
Total Revenue, Fiscal Year End
11/30/85: \$7,945,271

COMP-U-CHECK, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	11/85	11/84	11/83	11/82	11/81
Revenue	\$ 7,945	\$ 6,642	\$ 5,907	\$ 4,852	\$ 4,028
• Percent increase from previous year	20%	12%	22%	20%	18%
Income before taxes	\$ 555	\$ 767	\$ 547	\$ 360	\$ 243
• Percent increase (decrease) from previous year	(28%)	40%	52%	49%	195%
Net income	\$ 345	\$ 394	\$ 361	\$ 308	\$ 243
• Percent increase (decrease) from previous year	(12%)	9%	17%	27%	195%
Earnings per share	\$ 0.26	\$ 0.30	\$ 0.28	\$ 0.24	\$ 0.19
• Percent increase (decrease) from previous year	(13%)	7%	17%	26%	171%

- Comp-U-Check management attributes the lower pre-tax earnings to lower discount rates and higher net claims on dishonored checks which are problems industry wide.
- Comp-U-Check had expanded rapidly into new geographical markets with its largest national account. The discount rate charged to this account was insufficient to offset the increased volume of dishonored checks.

COMP-U-CHECK, INC.

- The volume of dishonored checks placed a burden on the Collection Department to make up for the lower rates in the recovery of dishonored checks.
- Comp-U-Check has taken the following steps in order to prevent a recurrence of these problems.
 - Comp-U-Check has increased its discount rate to a more appropriate level on high volume but only moderately profitable accounts.
 - As a result of this action, Comp-U-Check lost its largest national account in December 1985 when the account cancelled Comp-U-Check's service and began an attempt to perform the service in-house.
 - Since December, Comp-U-Check has made steady progress in recapturing the lost volume at rates that will make the new accounts profitable.
 - Comp-U-Check began converting its collection procedures to an on-line system during the past fiscal year in order to enhance its recovery rate and improve its Collection Department.
- Revenue for the three months ended February 28, 1986 decreased 5% from \$2 million in 1985 to \$1.9 million in 1986. Net income for the period increased 13% from \$107,645 in 1985 to \$122,084 for the same period in 1986.
- Currently, Comp-U-Check has approximately 110 employees.
- Comp-U-Check has incorporated two new subsidiaries to provide services for Comp-U-Check's Private Label Credit Card (PLCC) service.
 - There are two parts to the PLCC service as follows:
 - Comp-U-Check uses its computer to authorize and process individual transactions when a retail buyer uses a merchant's private label credit card. Comp-U-Check uses the transaction data to prepare and issue monthly billing statements to the credit card user. Comp-U-Check can also provide management reports using this data.
 - Comp-U-Check Retail Services, Inc. will provide the first part of the PLCC service.
 - Comp-U-Check advances cash to retailers on credit sales processed through the PLCC service.
 - Comp-U-Credit, Inc. will provide the financing part of the PLCC service.

SOURCE OF REVENUE

- Comp-U-Check derived all of its fiscal 1985 revenue from processing services. Approximately 88% was derived from check guarantee services, 4% from check verification services, and the remaining 8% from collection agency services, on-line data base services, and other services.



COMPANY HIGHLIGHT

COMPUFACT
1430 South Village Way
Suite M
Santa Ana, CA 92705
(714) 972-2000

Bob Pliha, President and CEO
Private Corporation
Total Employees: 57
Total Revenue, Fiscal Year End
12/31/83: \$5,000,000*

THE COMPANY

- COMPUFACT, founded in January 1983, provides manufacturing and financial applications software products and turnkey systems to the discrete manufacturing and distribution industry sectors.
- On January 21, 1983, COMPUFACT was formed with the acquisition of the assets of Manufacturers Resources and Planning, Inc. (MRP) and all rights to its MAN-FACT® II set of manufacturing and financial applications software products. Terms of the acquisition were not disclosed.
 - MRP had approximately 40 employees and estimated annual revenue of \$3 to \$4 million at the time of the acquisition. Its operations were merged into COMPUFACT.
- COMPUFACT management estimates 1983 revenue will reach \$5 million and anticipates an 80% growth rate for 1984.
 - The company forecasts a 50% growth rate during 1985 and 1986.
 - COMPUFACT receives financial support from two investment groups: Gerard Capital of San Diego and Asset Management of Palo Alto (CA).
- As of November 1983 COMPUFACT had 57 employees, segmented as follows:

Marketing/sales	12
Customer support/ software services	15
Research and development	19
General and administrative	<u>11</u>
	57
- Major competitors include American Software, ASK Computer Systems, NCA Corporation, and Comserv.

*Company estimate

COMPUFACT

KEY PRODUCTS AND SERVICES

- COMPUFACT estimates that 80% of 1983 revenue will be derived from turnkey systems and 20% from applications software sales.
- COMPUFACT markets and supports the MAN-FACT II integrated management information system for manufacturers and distributors as a Prime-based turnkey system or as a separate software package.
 - MAN-FACT II's on-line application modules function as integrated or standalone systems. Application options expand module capabilities and can be added to the system at any time. Users can select from five categories of modules as follows:
 - Production.
 - Bills of Material.
 - Material Requirements Planning.
 - Master Scheduling.
 - Inventory Control.
 - Work Orders.
 - Distribution Resource Planning.
 - Yield Tracking.
 - Shop Floor Control Option.
 - Capacity Planning Option.
 - Cost Accounting Option.
 - Procurement.
 - Order Placement.
 - Receiving.
 - System Interface to Inventory Control, Accounts Payable, and Fixed Assets.
 - Financial.
 - General Ledger.
 - Fixed Assets.
 - Payroll.
 - Accounts Payable.
 - Accounts Receivable.
 - Personnel.
 - Financial Planning.
 - Marketing.
 - Sales Order Processing.
 - Automatic Invoicing.
 - Sales History.
 - Sales Forecasts.

COMPUFACT

- Sales Leads.
- Model Configuration Option.
- System Control.
 - Security.
 - ELF (Easily Learned File manager) application generator.
 - Utilities.
- MAN-FACT II may be installed in its standard format or may be customized to user specifications.
- MAN-FACT II runs on all Prime computers under the INFORMATION operating system.
- Various product pricing structures are available.
- Examples of low- and high-end turnkey systems pricing include the following:
 - A "starter kit" turnkey system, based on the Prime 2250 and including all application modules except Financial Planning, Fixed Assets, and Field Service (soon to be released), supports up to eight terminals and is priced at \$105,000.
 - A turnkey system based on the Prime 9950, including all MAN-FACT II software modules, and capable of supporting up to 129 terminals, ranges in price from \$400,000 to \$500,000.
- Software package pricing is as follows:
 - The bundled price for all MAN-FACT II software modules, capable of supporting up to eight terminals, is \$40,000. Bundled software with unlimited terminal support is priced at \$125,000.
 - Unbundled prices range from \$5,000 to \$15,000 per module.
- MAN-FACT II currently has 72 combined turnkey and software package installations. Most of the installations are turnkey systems.
- COMPUFACT is currently developing an additional MAN-FACT II module for field service. Availability is scheduled for March 1984.

COMPUFACT

INDUSTRY MARKETS

- An estimated 70% of COMPUFACT's 1983 revenue is derived from discrete manufacturers and 30% from the distribution industry.
- COMPUFACT markets its products primarily to medium-size corporations (\$5 to \$50 million in revenue) and large divisions of Fortune 1000 companies.

GEOGRAPHIC MARKETS

- One hundred percent of COMPUFACT's revenue is derived from the U.S.
 - Approximately 85% of revenue is derived from Western states and 15% from the Midwest.
- Branch offices are located in San Diego, Santa Clara, and Woodland Hills (CA).
 - The company will open offices in Chicago and Dallas during 1984 as part of a plan to increase marketing efforts in the Midwest.
- COMPUFACT is establishing a dealership in New Zealand, COMPUFACT Ltd., to market its products.

COMPUTER HARDWARE AND SOFTWARE

- COMPUFACT has two Prime 750s installed at its headquarters and one Prime 750 installed at its Santa Clara branch office, all running under INFORMATION.